Food and Agriculture Organization of the United Nations

# Territorial approaches to forest governance

## Current status, challenges and solutions for improvement

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# Territorial approaches to forest governance

## Current status, challenges and solutions for improvement

by

**Jean Claude Nguinguiri**
**Food and Agriculture Organization of the United Nations, Rome**

and

**Stephanie Mansourian**
**International consultant**

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**
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# Abbreviations

| | |
|---|---|
| **AACIAR** | Australian Centre for International Agricultural Research |
| **AMB** | Archipelago Management Board |
| **ATIX** | Associação Terra Indígena Xingu (Xingu Indigenous Land Association) |
| **CCA** | Community-conserved area |
| **COMDEKS** | Community Development and Knowledge Management for the Satoyama Initiative |
| **COP** | Conference of the Parties |
| **CPR** | Common Pool Resource |
| **CREMA** | Community resource management area |
| **CRMC** | Community resource management committee |
| **CRMP** | Collaborative resource management policy |
| **ENGO** | Environmental non-governmental organization |
| **EPCI** | *Etablissement public de coopération intercommunale* |
| **EU** | European Union |
| **FAO** | Food and Agriculture Organization of the United Nations |
| **FCP** | Forest Communities Programme |
| **FCPF** | Forest Carbon Partnership Facility |
| **FLR** | forest and landscape restoration |
| **FLRM** | Forest and Landscape Restoration Mechanism |
| **FUNAI** | *Fundação Nacional dos Povos Indígenas* (National Indian Foundation) |
| **GCF** | *Gestion Contractualisée des Forêts ('contracted forest management')* |
| **GCF** | Governors' Climate and Forests Task Force |
| **GIS** | Global Information System |
| **GIZ** | *Deutsche Gesellschaft für Internationale Zusammenarbeit* (German Agency for International Cooperation) |
| **GELOSE** | Gestion Locale Sécurisée |
| **GPFLR** | Global Partnership on Forest Landscape Restoration |
| **ICC** | International Co-ordinating Council |
| **ICCA** | Indigenous and Community-Conserved Areas ("territories of life") |
| **ICRAF** | World Agroforestry |
| **IGE** | Institute for Global Environmental Strategies |
| **IMFN** | International Model Forest Network |
| **IPBES** | Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services |
| **IPCC** | Intergovernmental Panel on Climate Change |

| | |
|---|---|
| **IPLCs** | Indigenous Peoples and Local Communities |
| **IPSI** | International Partnership for Satoyama Initiative |
| **IUCN** | International Union for Conservation of Nature |
| **KfW** | *Kreditanstalt für Wiederaufbau* (German development bank) |
| **MAB** | Man and Biosphere programme |
| **NDC** | Nationally determined contribution |
| **NGO** | non-governmental organization |
| **OECD** | Organisation for Economic Co-operation and Development |
| **OECM** | other effective area-based conservation measure |
| **PES** | payment for ecosystem services |
| **PIX** | Parque Indígena do Xingu (or Xingu Indigenous Area) |
| **REDD+** | Reducing Emissions from Deforestation and forest Degradation, plus the sustainable management of forests, and the conservation and enhancement of forest carbon stocks |
| **ROAM** | Restoration Opportunities Assessment Methodology |
| **SEPLS** | Socio-Ecological Production Landscapes and Seascapes |
| **SILC** | Secretariat for International Landcare |
| **SISA** | System of Incentives for Environmental Services |
| **UCEGEO** | *Unidade Central de Geoprocessamento do Estado do Acre* |
| **UK** | United Kingdom of Great Britain and Northern Ireland |
| **UNDP** | United Nations Development Programme |
| **UNEP** | United Nations Environment Programme |
| **UNEP-WCMC** | UNEP World Conservation Monitoring Centre |
| **UNESCO** | United Nations Educational, Scientific and Cultural Organization |
| **UNFCCC** | United Nations Framework Convention on Climate Change |
| **UNU-IAS** | United Nations University Institute for the Advanced Study of Sustainability |
| **USAID** | United States Agency for International Development |
| **VCF** | Village Conservation Forum |
| **WHO** | World Health Organization |
| **WRI** | World Resources Institute |
| **WWF** | World Wide Fund for Nature |

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# Executive summary

Territorial approaches to forest governance reflect a shift away from plot level toward larger spatial scales in forest management, and away from exclusively public sector governance to multistakeholder governance that includes local communities, regional groups, national governments, private companies, civil society organizations and international bodies. Institutions associated with these different groups, and found at different spatial and administrative scales, have a direct impact on the effectiveness of forest management and governance.

The overall purpose of this report is to improve forest management and governance by enhancing the understanding of territorial approaches to forest governance. More specifically, this report aims to identify current practices, positive and negative lessons, and institutional options for effective forest governance at larger scales such as landscapes.

The target audiences for this report are:

- policymakers at both national and local [municipal, provincial] levels; and
- practitioners working with communities at different levels and focusing on territorial management, governance, and planning, among other areas.

The first section of the report reviews key concepts on territorial approaches to forest governance, including: territory/territorial approach; landscapes; social-ecological systems; jurisdictional approaches; governance; common pool resources; tenure and property rights; and power in the context of territorial approaches.

In Section 2, several case studies are reviewed to better understand the successes and challenges that have emerged from these experiences. The case studies are divided into three categories. The first category comprises "large-scale initiatives or programmes" that are generally resource partner- or organization-driven initiatives, have a fixed duration, a relatively fixed set of goals and a framework within which local initiatives are inserted. International Model Forest Network (IMFN), Commonland, International Partnership for *Satoyama* Initiative (IPSI), Global Landcare (formerly Landcare International) and Man and Biosphere Reserves are included in this category. The second category comprises "international approaches" to governance arrangements that provide broader concepts and ways of functioning rather than specific programmes. Forest landscape restoration (FLR); Reducing Emissions from Deforestation and Forest Degradation fostering conservation, sustainable management of forests and enhancement of forest carbon stocks (REDD+); and Indigenous and community conserved areas (ICCAs) fall under this category. It should be noted that the distinction between large-scale initiatives and international approaches is not perfectly clearcut, but they are separated here since one represents specific programmes that are resource partner-led and the other represents broader approaches in forest (or natural resource) management that may be implemented by multiple actors operating in separate arenas. Finally, the third category reflects the

diversity of locally driven approaches to large-scale forest management and governance. These bottom-up initiatives are located in specific areas, in contrast with the other two categories. Cases reviewed cover the whole world and are the Xingu Indigenous Park in Brazil, Community Resource Management Areas (CREMAs) in Ghana, Regional Nature Parks in France, co-management of a protected area in Gwaii Haanas in Canada, and co-management in the Sundarban mangrove in Bangladesh.

Section 3 provides an analysis of the case studies followed by an overview of success factors and challenges. The key success factors are:

- **Partnerships** – Partnerships, networks, coalitions and other forms of collaboration appear central to the successful governance of forested landscapes.
- **Inclusivity** – All cases demonstrated the importance of including diverse stakeholders with vested interests in the areas under review.
- **Locally grounded** – Most of the cases reviewed have strong local roots.
- **International launchpad** – Several initiatives have benefitted from the international visibility generated by a major launchpad (such as a global conference) that generates momentum and interest in the initiative.
- **Business ventures** – Ensuring the development of a viable business proposition is a way of engaging local communities and securing their long-term benefits from the landscape, while ensuring the impact on the environment is minimized.
- **Knowledge** – Various examples refer to the importance of co-construction of the knowledge base, evidence-based management and the integration of western and Indigenous knowledge.
- **Top-down and bottom-up** – Combining top-down approaches (such as the United Nations Educational, Scientific and Cultural Organization (UNESCO)-led Man and Biosphere Programme) with bottom-up approaches (such as traditional land management practices) allow for more comprehensive mechanisms to govern the landscape.
- **A shared problem** – Recognition of a shared problem may help to generate the momentum necessary for collaborative governance approaches.
- **Continuous learning** – Often good cases build on previous experiences, institutions, projects or models.
- **Integrating forests with agriculture and other land uses** – Critical to many of the approaches explored here is the importance of integrating forests with other land uses, and in particular food production systems. The larger scale provides the opportunity to develop different land uses and to better balance the different functions that forests can provide.

Challenges that have been identified include:

- **Spatial framing of governance** – Larger spatial scales bring more options for trade-offs but also, more stakeholders and therefore, more interests and more complexity, while smaller scales make it easier to manage forests, but also result in less resilience and potentially higher risks.

- **Elite capture** – At times, the engagement of local communities may be flawed with elites capturing the benefits or being the only ones represented within governance bodies.
- **Silos** – A horizontal challenge of large-scale forest initiatives is the lack of integration across sectors.
- **Political change** – Over the lifetime of many of the initiatives reviewed, political changes have occurred that have had important impacts on these initiatives.
- **Scale mismatches** – Scale mismatches can occur between the objectives set for the ecological system and those set for the social system. They also occur within the social system or between administrative scales.
- **Rhetoric versus practice** – Where initiatives have been externally driven, the difference between rhetoric and practice can lead to poor implementation (or abandonment of initiatives as soon as the external actors leave).
- **Tenure rights** – In many cases, the lack of security of tenure rights is a critical, or at least a compounding, factor to poor forest governance and leads to a short-term focus with the ensuing mismanagement, degradation or loss of forest resources.
- **Lack of local grounding and power imbalances** – In many cases, imposing external agendas leads to poor integration of local priorities and power imbalances.
- **Long-term nature** – In all cases, the complexity of social and ecological systems signify that multiple phases are necessary to go from decision-making to implementation.
- **Commodification of nature and forests** – Many of the approaches refer to forest "assets" and "capital" thereby commodifying forests, which reflects a different worldview than that of most Indigenous Peoples and Local Communities (IPLCs).

Building on the findings from the case studies, 13 lessons have been identified. These lessons are of value to practitioners and are presented in Box 1 below.

BOX 1

**Overview of lessons learned from the reviewed case studies**

**Lesson 1** – Larger spatial scales provide an opportunity for more actors to voice their ***interests***.

**Lesson 2** – The ***boundaries*** of a landscape are not set in stone.

**Lesson 3** – Many actors play a ***part*** in the governance of forested landscapes.

**Lesson 4** – It is possible to follow different ***pathways*** in seeking to achieve forest governance in larger spatial scales.

**Lesson 5** – A ***phased*** approach provides sufficient flexibility to adapt to evolving social and ecological systems.

**Lesson 6** – Rallying around a shared problem helps to establish common foundations for advancing forest governance.

**Lesson 7** – It is fundamental to learn from ***locally rooted*** initiatives and to build from those.

**Lesson 8** – The concept of local ***custodianship*** is essential to the effective governance of forested landscapes.

**Lesson 9** – It is challenging to find the right ***balance*** between objectives set for the ecological system and those set for the social system.

**Lesson 10** – Securing ***tenure*** recognizes legitimate rights and provides assurances that benefits will accrue to the rightful custodians of the territory or forest.

**Lesson 11** – Formal and informal ***institutions***, existing or new, need to be strengthened for effective forest governance.

**Lesson 12** – ***Alternative-income generating activities*** are critical to marry ecological and social outcomes.

**Lesson 13** – A careful analysis of actors and power relations reveals where the ***centres of power*** are situated.

*Source:* Authors' own elaboration.

The last section provides seven guiding principles and associated recommendations building on success factors identified in the case studies, ways to overcome challenges and reflections on lessons learned. These guiding principles focus on strengthening institutions to better tackle the multiple scales of governance inherent to territorial approaches.

### Guiding principle 1: Dynamic – *Institutions need to respond to the dynamic nature of territories*

Because territories evolve in space and time, institutions need to be flexible and adaptable.

**Recommendations**

- Recognize that landscape or territorial boundaries might evolve with time and that institutions may need to adapt in response.
- Implement clear monitoring mechanisms to track changes in the social-ecological system, and appropriately respond and adapt to these changes.
- Consider mechanisms to promote top-down and bottom-up linkages (for example, through multistakeholder platforms) associated with the forested landscape, as these can improve overall governance.
- Record a jointly negotiated scenario in a document such as a charter, vision statement or management plan. Such a document can be revisited if the social or ecological dynamics change, can help to frame the geographical scope of institutions and can provide direction and a common understanding of the desired outcomes in the forested territory, providing some stability amid dynamic conditions.

**Guiding principle 2: Polycentric** – *Governance arrangements should be designed to connect multiple scales, reflecting the multilayered nature of complex social and ecological systems*

Polycentric governance reflects multiple decision-making centres that are characteristic of territorial approaches and social-ecological systems.

**Recommendations**

- Identify who takes which decisions and at what level with respect to forest and landscape areas. This helps to shape relevant policies, programmes and strategies.
- Take the time to build and sustain trust, and to fully understand the actors and associated formal and informal institutions within a forested landscape, to ensure better engagement across these different groups.
- Recognize the value of different actors and associated institutions situated at different administrative scales or ecological boundaries, and how they relate to the forested landscape, to provide strong foundations for effective governance.
- Recognize that external agencies can play a role in bringing together different actors (acting as an umbrella or a neutral agent) to formalize governance arrangements.
- Use inter-disciplinary teams to support collaboration across sectors and improve mutual trust and understanding around governance priorities.
- Analyse and understand how power is divided among stakeholders, which is critical to designing equitable policies for territorial governance.
- Prioritize strengthening the capabilities of local communities and their institutions and producer organizations so that their voices can be heard, and they can be represented effectively in governance arrangements at higher administrative scales.
- Foster the use of partnerships (such as alliances and networks) across different stakeholder groups (for example, communities, civil society organizations and non-governmental organizations [NGOs]) to strengthen the voices of less powerful stakeholders in governance mechanisms at different spatial scales.
- Discuss with key stakeholders (national and local) which pathways (such as sectoral policies or changes to tenure rights) might have the greatest impact on governance of the forest and landscape.

**Guiding principle 3: Locally rooted** – *Ensure that priority is given to governance at the grassroots level to achieve common objectives*

It is important to build on the wealth of locally grounded approaches to land and forest management, resulting from centuries of intimate local knowledge of the landscape. This is also in line with the principle of subsidiarity, given that the planning process should be located at the lowest governance level possible unless action on a higher level is more efficient.

**Recommendations**

- Build on traditional practices associated with the custodianship of forests and ground interventions in the local context.
- Understand local (informal) norms and institutions, governance bodies and mechanisms

to identify useful intervention points to improve governance of the forest and landscape.
- Recognize and promote local (customary and traditional) governance arrangements, practices and tools to contribute to improving the overall governance of a forested landscape.
- Strengthen local institutions that are critical to the forested territory.
- Work with local partners (for example, NGOs, civil society organizations or farmers' associations) to establish or formalize (if necessary) legitimate representative institutions that can play a central role in the governance of the landscape.
- Implement culturally sensitive approaches to ensure that institutions governing a forested landscape are locally grounded.
- Assess and incorporate relevant local knowledge in grounding institutions in the communities situated within the landscape.
- Integrate local customs and cultures in governance processes to strengthen and enrich them.

**Guiding principle 4: Empowering** – *Ensure grassroots management entities are empowered, notably through secure forest tenure*

Legitimate rights holders need to be empowered, by assuming rights-based approaches, so that they can be active and meaningfully informed participants in shaping their landscape.

**Recommendations**

- Establish mechanisms that recognize and secure legitimate tenure rights, to contribute to equity, legitimacy and sustainability within the landscape.
- Strengthen the capabilities of local communities to enhance their decision-making power.
- Strengthen the capabilities of, and provide support to, local and devolved authorities to ensure that they can be active and meaningful participants in local governance institutions.
- Map power relationships among different communities and other landscape actors (for example, private sector interests) to contribute to designing appropriate institutions for the landscape and its forests.
- Provide platforms and partnerships for open and equitable negotiations to strengthen inclusive representation in decision-making bodies.
- Ensure locally appropriate and culturally sensitive engagement practices to provide all participants with an equal voice.
- Facilitate negotiations and consensus-building among different stakeholder groups in the landscape (for example, communities, corporations, and Indigenous Peoples) to foster effective governance.
- Balance power asymmetries between rightsholders (such as local communities and Indigenous Peoples) and other stakeholders (such as investors) to foster effective and equitable negotiation.
- Find leverage points that can influence governance (such as traditional authorities or legally recognized and protected customary tenure) and contribute to securing benefits for right-holders in the landscape.

**Guiding principle 5: Financially viable** – *Integrate financial and business considerations to secure sustainability*

Interventions in a landscape that aim to improve forest governance have to consider costs and benefits, and ensure that they are financially viable for local communities, particularly the marginalized and most vulnerable.

**Recommendations**

- Acknowledge and address the opportunity costs brought by changes in forest management and governance.
- Consider the diverse components of the well-being of local communities, including food security, healthcare and jobs, among others, to understand the costs and benefits of interventions in a landscape.
- Assess local livelihoods to define viable business propositions that are compatible with sustainability and resilience of the forested landscape.
- Carry out a cost-benefit analysis for forest management interventions from the viewpoint of key local communities before any intervention to provide critical information that can shape incentives, compensation and other economic policies.
- Identify potential conflicting uses of forests to determine where incentives should be prioritized.
- When designing forest interventions, minimize losses for local communities by prioritizing and providing compensation, if necessary.
- Long-term and innovative funding mechanisms (such as payment for ecosystem services schemes [PES]) can contribute to securing sustainability.

**Guiding principle 6: Collaborative** – *Promote collaborative approaches that bring different expertise, knowledge, strengths and roles together around a common problem*

Collaboration is essential to begin to align different interests and work toward a common objective.

**Recommendations**

- Identify a common problem or trigger to foster collaborative approaches to forest governance. A common problem is an effective mechanism to engage different governance actors.
- Build trust among disparate groups (for example, communities, civil society organizations, NGOs, local authorities and extension officers) situated at different levels of governance through professionally facilitated negotiations toward a common vision for the forest and landscape. A common long-term vision for the territory provides a basis for associated governance and management interventions.
- Use visualising tools, such as global information systems (GIS) and 3-D models, to support the development of a common vision for the forested landscape.

**Guiding principle 7: Inclusive** – *Foster inclusion, particularly of the more vulnerable and marginalized communities in the landscape*

Inclusive approaches span social and ecological dimensions, cross-sectoral integration and the needs of different stakeholder groups.

**Recommendations**

- Set objectives for desired changes in both the social and ecological systems through multidisciplinary teams that are informed by local knowledge.
- Integrate sectors through the creation of national and local-level cross-sectoral decision-making bodies or coordination mechanisms.
- Strengthen the legitimacy of governance bodies by integrating rights holders.
- Design actions that can promote win-win solutions between communities and rights holders, or else consider fair compensation mechanisms.
- Identify levers of change (for example, related to policies, markets or social aspects) to provide a useful starting point for effecting changes in governance.

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# Introduction

A forest can be defined as an ecosystem, a sector or land that can be used by different interests. These multiple attributes have led to divergent approaches to forest management. For example, as an ecosystem, a forest may be the target of protection; as a sector, it may be the target of specific management policies; and as land that can be used, it may be subject to diverse economic interests. Frequently, forests end up being the object of "multiple, and often conflicting" interests that require more integrated responses (Lazdinis, Angelstam and Pülzl, 2019).

In the late twentieth century, approaches to forest management began to change. Until then, plots or stands that were the focus of forest management plans, represented the main scale at which forest management and related decisions were considered. However, a more complex and integrated view of forest management began to appear with the growing recognition of the multiple dimensions of forests – beyond simply timber production – which also required the consideration of influences at scales well beyond the stand (Lazdinis, Angelstam and Pülzl, 2019). For example, the growing importance of climate change and the role of forests in both sequestering and emitting greenhouse gases, has brought an entirely new dimension to forest management. Recognition of the multiple dimensions of forests also resulted in the inclusion of multiple sectors and administrative departments (for example, the health, agriculture, environment and finance sectors), as well as other actors (such as Indigenous Peoples and local communities), bringing governance factors to the fore. In the late 1980s and early 1990s, as governance aspects became more prominent, it was not just the ecosystem from an ecological perspective that emerged as the centre of focus, but rather the broader landscape or the social-ecological system (Berkes and Turner, 2006; Ostrom, 2009).

The late twentieth century also saw a reduced role of the state in environmental governance more generally, and a rise of non-state actors, including civil society and the private sector, leading to what was termed "new governance" (Kooiman, 1993). In forest management, this gave rise to the private regulation of forest operations, through certification schemes such as the Forest Stewardship Council (Cashore *et al*., 2005). It also resulted in the increasingly powerful role of non-governmental organizations (NGOs, Adams, Hodge and Sandbrook, 2014). Assessing the linkages between stakeholders at different scales became necessary, particularly because each stakeholder played a distinct role and could also be the holder of particular knowledge (Armitage, De Loë, and Plummer, 2012). For instance, the role of Indigenous communities in managing natural resources started to be valued in the late twentieth century (Borrini-Feyerabend and Kothari, 2008). Polycentric governance (Nagendra and Ostrom, 2012) provided a means of understanding and describing these decision-makers that began to appear in different spheres.

It was not only the constellation of actors that gained in complexity but also the understanding of the elements of governance. Rules and norms that determine how forests are managed include formal government policies as well as a range of informal norms, such as those related to cultural aspects associated with forests or with international trade and the economic values of different forest products and services. They also include tenure rights that determine who has access to which elements of a forest and for how long. For example, in countries such as Madagascar, natural forests are owned by the State, but exotic Eucalyptus stands can be privately owned, which creates a disincentive for natural regeneration of native forests. In contrast, in Ghana the introduction of tree certificates created more secure ownership over planted trees and thereby, an incentive to plant trees (Mansourian, Walters and Gonzales, 2019).

A growing recognition of the complexity and uncertainty of environmental management in general, and forest management in particular, has also led to an emphasis on adaptive governance, which is associated with closer monitoring, learning and adaptive management (Plummer, Armitage and De Loë, 2013). For example, concerns expressed around planetary boundaries and tipping points (Steffen *et al*., 2015) highlight the need to respond adaptively to feedback from planetary systems. In response to this complexity, institutional arrangements are necessary that promote the co-production and negotiation of information and knowledge both within and across spatial and administrative scales (Brondizio, Ostrom and Young, 2009).

In essence, there are three key elements that mark this shift in forest governance:

- **Spatial scales** – the recognition that influences on forests come from different spatial scales. These scales may be vertically or horizontally connected.
- **Multiple actors** – the recognition that different actors are situated at these different spatial scales and influence resource use. Local actors may possess invaluable and intimate indigenous knowledge of the forest, in contrast with remote international actors who may possess a strong economic interest in the same forest.
- **Range of rules and norms** – the growing complexity of rules and norms shape interactions with forests. These rules operate across the different scales and different groups of actors, sometimes clashing with other rules that impact the same resources.

## Purpose of the report

The overall purpose of this report is to improve sustainable forest management by enhancing the understanding of territorial approaches to forest governance. More specifically, this report aims to identify current practices, positive and negative lessons, and institutional options for effective forest management at larger scales, such as landscapes.

## Audience

- Technically oriented policymakers at both national and local (municipal and provincial) levels; and
- practitioners working with communities at different levels or scales focusing on territorial management, governance and planning, among others.

## Contextual factors

The FAO 2022–2031 strategy highlights the importance of institutions and governance as a "trigger" for transformative change. Its theory of change recognizes the importance of institutions and governance to achieve the necessary transformation of agri-food systems that will result in a better environment (FAO, 2021). There is also a growing recognition of the role of forests in contributing to various (if not all) sustainable development goals (FAO, 2018; Mansourian, 2018). A recent report by the Collaborative Partnership on Forests (Miller, Mansourian and Wildburger, 2020) for example, highlights the broader contribution of forests to poverty alleviation. Forests are also central to the climate change debates that are increasingly gaining global attention (IPBES, 2018 and 2019; IPCC, 2019). As such, it is timely to reflect on mechanisms to improve forest governance in the context of larger spatial scales where forests interconnect with other land uses and sectors.

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# 1 Concepts in territorial approaches to forest governance

There are many concepts and approaches that contribute to understanding and implementing territorial approaches to forest governance. This section briefly discusses a number of key concepts associated with territorial approaches to forest governance, beginning with concepts concerning scale and moving on to key concepts associated with governance. Box 2 highlights some key definitions used in this report.

BOX 2
**Key definitions used in this report**

**Territorial approach** – *"a space of governance for human activities."* It includes actors from the local community, village or town and the province or nation-state and presents an opportunity to connect and ground multiple levels. (Forster *et al.*, 2021)

**Landscapes** – *"a framework to integrate policy and practice for multiple competing land uses through the implementation of adaptive and integrated management systems"* (Reed, Deakin and Sunderland, 2015) and also "an iterative process of negotiation, trial and adaptation." (Sayer *et al.*, 2013)

**Governance** – *"interventions aiming at changes in environment-related incentives, knowledge, institutions, decision-making, and behaviors. (..) The set of regulatory processes, mechanisms and organizations through which political actors influence environmental actions and outcomes."* (Lemos and Agrawal, 2006)

*Sources:* See References for Box 2.

## Territory/territorial approach

Territorial approaches mark the move away from narrow sectoral approaches to spatial or geographical approaches that can combine not only different sectors, but also a range of key political actors (OECD, 2020). They place territories at the centre of development and provide a space linking the socio-political dimension with spatial geographies (McCall, 2016). The scale of territories is dynamic, and ideally "small enough to enable stakeholders to communicate and coordinate effectively, but large enough to accommodate diverse needs and interests while also addressing specific inter-dependencies and conflicts" (Forster *et al.*, 2021). Five principles have been defined for territorial approaches: place-based, people-centred, multi-actor, multilevel and cross-sectoral (Ibid).

## Landscapes

Gaining in popularity in the forest arena in the latter part of the twentieth century, the term "landscape" can be traced back to Alexander von Humboldt in the early nineteenth century who defined it as the total character of a region (Bastian, 2001). Today, it is used by several disciplines and with different foci, at times emphasizing social or ecological dimensions, and more often, as a space where the trade-offs inherent to social-ecological systems can play out (Sayer *et al.*, 2013). On the one hand, landscapes may be defined by the spatial and ecological characteristics of an area (Turner, 1989). On the other hand, landscapes may refer to the space within which trade-offs between conservation and development can be minimized (Reed, Deakin and Sunderland, 2015). For the discipline of landscape ecology, landscapes are seen as distinct geographical units, generally no larger than 10 000 hectares (Pfund, 2010). They are heterogeneous spaces demonstrating a series of patterns (Forman and Godron 1981; Turner, 1989; Lindenmayer *et al.*, 2008; Wu, 2013) or an area large enough to contain all representative biodiversity for a given biome (Noss, 1983). For human geographers, landscapes are seen as a human construct (Sgard, 2010) and the European Landscape Convention defines a landscape as "an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors" (European Landscape Convention, 2000). More broadly, landscapes offer a space to conceptualize the relationship between social and ecological systems (Antrop, 2005; Sayer *et al.*, 2013; Cassar, 2013), often called the "landscape approach" (Sayer *et al.*, 2013) or more generally, "integrated landscape management" (Scherr, Shames and Friedman, 2013; Reed *et al.*, 2016). It is often seen as a way of translating the Convention on Biodiversity's "ecosystem approach" into practice (Sayer *et al.*, 2013). Importantly, it is an intermediary space, generally lower than a national space, but larger than a site, and can link local practices and stakeholders to global processes (Görg, 2007; van Oosten, 2013). In the context of forests, that signifies a space within which multiple stakeholders can come together to put into practice national level priorities. This intermediary scale, with its specific features, is seen as promising to address environmental, and specifically, forest-related challenges.

## Social-ecological systems

Social-ecological systems reflect the view that humans are part of nature. Forest management, conservation and restoration take place within a social-ecological system with complex interactions – both social and ecological – and subsystems existing within the social-ecological system (Ostrom, 2009). Inevitably, this gives rise to tensions between objectives set for the social system (and between priorities of different stakeholders) and those set for the ecological system. In addition, social-ecological systems are situated at the intersection between other spatial scales (local, national and international) and also need to reconcile pressures from these different scales. These pressures also occur because different actors may have different interpretations of the issues (Wiegant, 2022).

## Jurisdictional approaches

Jurisdictional approaches can be seen as landscapes attached to a specific administrative level. They have been defined by von Essen and Lambin (2021) as "governance initiatives that promote sustainable resource use at the scale of jurisdictions through a formalized collaboration between government entities and actors from civil society and/or the private sector, based on practices and policies intended to apply to all affected stakeholders within the jurisdiction." Although it can be at the national level, generally the term is applied to subnational scales associated with a given authority: this may be a village, province or state. For example, the state of Acre in Brazil, as a distinct jurisdiction, has been active in the context of implementing REDD+ – Reducing Emissions from Deforestation and Forest Degradation (Duchelle *et al*., 2014). This jurisdiction is seen by scholars as potentially representing a "sweet spot" (von Essen and Lambin, 2021) which favours the implementation of effective and sustainable forest-related measures. It provides an opportunity for key stakeholders (from companies to communities to the government) to come together, and find a way to reduce deforestation, while promoting the sustainable production of agricultural commodities.

## Governance

In general terms, governance refers to the formal and informal rules, organizations and processes through which public and private actors articulate their interests and make and implement collective decisions. But it happens sometimes that governance has tackled in a normative fashion (e.g. International Union for Conservation of Nature's [IUCN] "good governance framework" – Springer, Campese and Nakangu, 2021). More comprehensive interpretations have been offered by scholars such as Arun Agrawal and Claudia Lemos. They define environmental governance as being "synonymous with interventions aiming at changes in environment-related incentives, knowledge, institutions, decision-making, and behaviours. More specifically, we use "environmental governance" to refer to the set of regulatory processes, mechanisms and organizations through which political actors influence environmental actions and outcomes" (Lemos and Agrawal, 2006). Governance, especially in the context of forests, is often defined as the way in which public and private actors (including formal and informal institutions; smallholder and indigenous organizations; small, medium-sized and large enterprises; civil-society organizations and other stakeholders) negotiate, make and enforce binding decisions about the management, use and conservation of forest resources.

## Common pool resources

Because forest resources (like many other environmental resources) can be seen as a common resource, it is worth briefly noting some key features of common-pool resources (CPRs). These are natural or human-made resources where one person's use reduces the amount available for another user. Because of the nature of CPRs, it is necessary to exclude outside users, but it is costly and difficult to do so. Thus, CPRs share two important characteristics: (1) excludability, signifying that it is difficult to exclude other users from the resource (such as fisheries), and (2) the ability to subtract, signifying that as each

person taps into the resource, it reduces the amount available for other users (Feeny *et al.*, 1990; Ostrom *et al.*, 1994). These can be private, public or community-managed, or any mix of the above. The Nobel laureate, Eleonor Ostrom, carried out ground-breaking research on CPRs to better understand how to ensure their effective governance. In particular, the following attributes that affected the relationships among users of the resources were identified: excludability and rivalry; renewability; mobility; stationarity; the distinction between resource systems as CPRs and their resource units (for example,

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forest versus timber); and clarity of boundaries (Ostrom, 2010). The difference between the resource and its units generates multilevel governance challenges as each may be subject to different rules (for example, tree tenure certificates in Ghana that do not necessarily match land or forest tenure – see case study 2.3.2 below).

Through her research on the commons, Ostrom developed "design principles" which portray the sorts of conditions that support effective governance (Ostrom, 1990): (1) clearly defined boundaries; (2) congruence between local conditions, appropriation and provision rules; (3) adaptability of collective choice arrangements; (4) appropriate monitoring; (5) graduated and implementable sanctions; (6) mechanisms for conflict resolution; (7) recognized rights to organize; and, (8) nested enterprises (which are the subject of multilayered governance or polycentric governance).

In turn, Ostrom also defined the attributes of the resource users that help to ensure effective governance of the commons. These include group size, cultural homogeneity, social capital or density of social networks, practices of reciprocity and the salience of the resource or lack of exit options for the resource users (Araral, 2014). The research finds that, where resource users had long-term ownership claims, they could communicate, establish rules, monitor them and impose sanctions for non-compliance together, there was a greater likelihood of effective management of the resource (Ostrom, 2010).

## Multiscale governance

Multiscale governance comprises "decision-making processes that occur within and across different politico-administrative levels, from the supra-national to the national and subnational levels" (Wiegant, 2022). It reflects the complex interactions, both vertical (between administrative levels or levels of decision-making) and horizontal (across sectors, or among different stakeholders) that have an impact on a social-ecological system. In their seminal book in 1998, Fikret Berkes and Carl Folke spoke of the "problem of fit" reflecting the need for social institutions to effectively operate along the social and biophysical scales (spatial and temporal) all the while recognizing that it is challenging to reconcile the two. Seeking to match biophysical and social systems thus requires some form of multilevel governance. This may be achieved through networks, partnerships, alliances or polycentric governance (see next subsection) (Berkes and Turner, 2006). Cross-scale mismatches are typical of environmental management, including large scale forest management. In cross-scale mismatches, there is a difference between the scale at which the ecological processes operate (for example, the landscape or the forest ecosystem) and that at which the governance arrangements operate (for example, the jurisdictional scale) (Cash *et al.*, 2006). When there is a mismatch, decision-making institutions do not align with the natural boundaries of the resource. In addition, decision-making may take place in parallel with traditional community institutions leading to overlaps (and contradictions). For example, in the case study of the Xingu Indigenous Park in Brazil (see case study 2.3.1) the priorities for the forests set by Indigenous Peoples and those of the government (both at the national and state level) were in direct contradiction.

### Polycentric governance

Polycentric governance is characterized by multiple decision-making centres (Ostrom, 2010). The weakening power of the central state coupled with the growing power of civil society and the private sector in the late twentieth century, have led to an increase in polycentric governance (Bixler, Jedd and Wyborn, 2018). It allows a flexible approach to decision-making that reflects the complex multilayered character of social-ecological systems, such as forested landscapes. Polycentric governance considers multiple perspectives that promote interlinkages across different actors (agencies, organizations and individuals) with an interest in the landscape (Bixler, Jedd and Wyborn, 2018). Although not an official mode of governance, polycentric governance reflects what is often a reality on the ground, with a proliferation of centres of decision-making coming together at different levels around a common resource or landscape. Recognizing this polycentricity aids in assessing who the decision-makers are and where the different centres of power are that impact on a given resource or landscape. Nevertheless, despite its success, some shortcomings have been identified, regarding the power dynamics that underpin polycentric systems (Morrison *et al.*, 2019).

### Multistakeholder transformative governance

Engagement of a wide range of stakeholders in policy dialogue at different spatial scales is fundamental for more inclusive forest governance and management. There is no single way to facilitate stakeholder engagement processes, and to achieve effective collaboration (Favreto *et al.,* 2021). Concepts such as multistakeholder platforms and multistakeholder partnerships have been applied in many projects to promote the collaborative approach for managing forest resources in large-scale and complex-resource settings. Multistakeholder platforms refer to long-term spaces created to promote dialogue, deliberation and collaborative action among social groups and organizations that stand to be affected, either positively or negatively, by decisions of public importance within a defined domain (Ratner *et al.*, 2022). Multistakeholder partnerships are formed where public and private partners pool their resources and competencies to address mutual goals more effectively (Jansen and Kalas, 2020). Multistakeholder partnerships should not be seen as a goal, in this respect, but as a part of multistakeholder governance that leads to the desired change and transformation. Unlike traditional approaches, multistakeholder transformative governance is characterized by its focus on the deliberative capacity, something innovative that turns out to be a decisive success factor for the effectiveness of multistakeholder partnerships (Jansen and Kalas, 2020).

### Tenure rights

Tenure is the relationship, whether legally or customarily defined, among people, as individuals or groups, with respect to land, fisheries, forests and water (FAO, 2002). Tenure rights with respect to forests are typically private, public or communal (Bruce, 1998). Forest tenure is generally defined as a bundle of rights that includes rights to access forests and obtain ecosystem goods and services, in relation to forest management, exclusion and alienation (Schlager and Ostrom, 1992). Whereas in most tropical countries, forests

have been held by communities under generations of customary tenure, colonialism precipitated nationalization by the state. As a result, in many countries, both *de jure* (statutory) and *de facto* (customary) rights co-exist and often lead to conflict over forests. To date it has been estimated that Indigenous Peoples and local communities manage or have rights to over a quarter of the world's land surface (Sterling *et al.*, 2020). Research indicates that secure tenure is an enabling condition for effective forest management (Nagendra, 2007; IPBES, 2018; McLain *et al.*, 2021). Other issues may also influence the way in which tenure affects forests. For example, the fragmentation of land ownership in Japan, with the privatization of landholdings, has been considered one of the reasons for the decline in traditional satoyama landscapes (see case study 2.1.3).

### Power in the context of territorial approaches

Larger spatial scales signify more stakeholders, which in turn equates to more vested interests, more uncertainty over resource tenure rights, and more overlapping jurisdictional and administrative authorities that are both formal and customary or informal. To pursue such interests, stakeholders employ power elements to shape forest resource use and management outcomes in different settings (Krott *et al.*, 2014). Decision-making appears to be a genuine political process in this context. When there is an imbalance of power, the most powerful stakeholders will have a strong influence on collective decisions despite the attention paid to inclusive approaches (for example, maps prioritizing restoration areas, as per the Restoration Opportunities Assessment Methodology, IUCN and World Resources Institute [WRI], 2014). Lake of power sharing increases the chances of inequitable outcomes (particularly for vulnerable and marginalized groups) and leads to injustice and conflicts (with negative impacts for people and forests). Nevertheless, in principle, planning, monitoring and engaging at a landscape scale provides an opportunity for many stakeholders to have a voice and the reconciliation of different objectives (Perring *et al.*, 2015), and negotiation of trade-offs (Sayer *et al.*, 2013). Recognizing and analysing these power dynamics can enhance inclusive decision-making processes, leading to more sustainable forest management outcomes (Charmakar, Ndzifon Kimengsi and Giessen, 2024).

The above subsections have served to frame some of the key elements that are necessary to better understand forest governance within larger spatial scales. The next section explores specific examples to identify major lessons emerging from these. For each initiative explored, the following questions will be answered to better describe the initiative:

- *Who are the main stakeholders?*
- *How is the territory framed?*
- *How are objectives set?*
- *What policies have supported the outcomes?*
- *What technical tools are used to achieve (or facilitate) desired objectives?*

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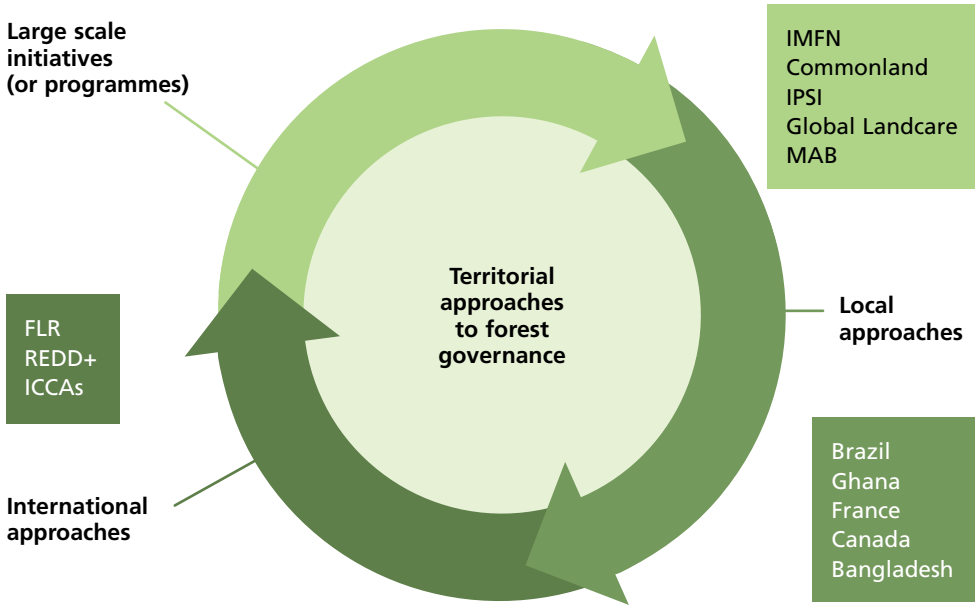
# 2 Overview of multiscale governance arrangements in forest management

Many initiatives exist around the world that can provide insight into multiscale governance arrangements in forest management. Selecting from this vast array was not an easy task, and many interesting and valuable cases have certainly been overlooked. Nevertheless, in the interest of conciseness, a representative sample has been selected and will be developed in this section. This sample of initiatives (Figure 1) is presented under three categories of arrangements: The first category refers to large-scale initiatives or programmes. These are resource partner- or organization-driven initiatives that have a fixed duration, a relatively fixed set of goals and a framework within which local initiatives are inserted.

FIGURE 1
**Overview of case studies**




*Note:* A IMFN – International Model Forest Network; IPSI – International Partnership for the Satoyama Initiative; MAB – Man and the Biosphere Programme; FLR – Forest landscape restoration; REDD+ – Reducing emissions from deforestation and forest degradation; ICCAs – Indigenous and community conserved areas.

*Source:* Authors' own elaboration.

For example, Commonland operates its projects within its "four returns" framework which – although relatively general – serves to frame the projects it supports. The second category comprises international approaches that provide broader concepts and ways of meeting specific national and international commitments and processes, especially those related to multilateral environmental agreements such as the United Nations Convention to Combat Desertification (UNCCD), the Convention on Biological Diversity and the United Nations Framework Convention on Climate Change (UNFCCC). This category includes forest restoration efforts through forest landscape restoration or global efforts to halt and reverse deforestation and forest degradation in addressing the climate crisis (REDD+). The distinction between large-scale initiatives and international approaches is not perfectly clearcut, but is meant to separate specific programmes that are resource partner-led from broader approaches in forest (or natural resource) management that may be implemented by multiple actors operating in separate arenas (for example, several projects under the FLR label). Finally, the third category reflects the diversity of locally driven and location-specific approaches to large-scale forest management and governance. Importantly, the selection for these case studies is also geographically representative.

## 2.1. LARGE-SCALE INITIATIVES (OR PROGRAMMES)

### 2.1.1. International Model Forest Network

Initiated in Canada in the 1990s, model forests represent a "process for bringing a diverse partnership of individuals and groups together to realise a common vision of sustainable development in a large landscape" (IMFN website). They came about as a response to growing concern over Canada's unsustainable approach to forest management, combined with a decline in the market for timber (Besseau, Dansou and Johnson, 2002). As a result, many model forests were established in complex social environments characterized by conflict or poor cooperation among stakeholders (Bullock, Jastremski and Reed, 2017). In practice, a model forest brings stakeholders together to define sustainability in their own context, identify a common vision and set of goals, devise a governance structure and strategic plan, and then work together to achieve that plan (IMFN website). While the components of a model forest may not be unique, it is the packaging of these components that is considered innovative, including the ability to better link policies and technical tools (Besseau, Dansou and Johnson, 2002). Emphasis is placed on networking, first at the local level, to agree on a common vision, to co-create knowledge about the landscape and to come up with options for its sustainable development. It also establishes a space for learning, building trust among stakeholders and to lay the foundations for aligning efforts (Besseau, Dansou and Johnson, 2002). Importantly, model forests are depicted as living laboratories that act as a middle ground between policy and practice where stakeholders can come together to develop and apply innovative practices that could eventually be scaled beyond the model forest (IMFN website; Bullock, Jastremski and Reed, 2017).

In 1992 at the Rio Earth Summit, the Canadian Government launched the International Model Forest Network, intended to expand its experience with model forests abroad. A

Secretariat was established at Canada's International Development Research Centre but was then moved in 2004 to the Canadian Forest Service within Natural Resources Canada in Ottawa (Bonnell *et al.*, 2012). The first non-Canadian model forests were established in Mexico (2) and Russia (1), each "twinned" with a Canadian model forest (Besseau, Dansou and Johnson, 2002). Currently, the IMFN is a network of 60 forests in 35 countries covering an area of 73 million hectares (IMFN website). Six principles guide model forests (Box 3).

BOX 3
**Six principles for model forests**

1. **Partnership** –At the core of a model forest is the partnership between stakeholders representing diverse interests but willing to "work towards a common vision for the sustainable management of the landscape."
2. **Landscape** – The landscape provides the territory within which a model forest operates, and is a large area whose boundaries are recognized by stakeholders.
3. **Commitment to sustainability** – "Sustainable management practices promote the generation and equitable distribution of economic and social benefits derived from natural resources."
4. **Governance** – Governance of the model forest is "representative, participatory, transparent and accountable, and promotes collaborative work among stakeholders."
5. **Programme of activities** – Activities reflect the vision agreed upon by stakeholders.
6. **Knowledge-sharing, capacity-building and networking** – Enhancing local and national capacity for sustainable forest management is central to the concept of model forests.

*Source:* International Model Forest Network. n.d. Landscapes, partnerships and sustainability. https://imfn.net

In Canada, each model forest was set up as an NGO and granted a USD 1 million start-up budget (which was reduced by half in a second phase and to USD 375 000 per site in a third phase). This was intended to enable leveraging of further funding (Bullock, Jastremski and Reed, 2017).

The unfolding of the model forest process in Canada can be viewed through four five-year phases (Bullock, Jastremski and Reed, 2017). The first phase focused on building partnerships and research. The second phase emphasized information-sharing, development and innovation. It also began focusing on measuring impact through the development of locally relevant criteria and indicators for sustainable forest management (Bullock, Jastremski and Reed, 2017). The third phase emphasized the uptake and dissemination of work on social dimensions. In Canada, the model forest plan formally ended in 2007, and was replaced by the Forest Communities Programme (FCP). These programmes were intended to build partnerships with communities to carry out research and test innovative approaches to forest-based community sustainability. The Canadian Government provided core funding to 12 FCPs (eight existing model forests and four new sites) of USD 325 000 a year between 2007 and 2012 (Bullock, Jastremski and Reed, 2017).

Internationally, however, the IMFN continued to thrive and has spawned six subregional initiatives (African Model Forest Network, Latin American Model Forest Network, Mediterranean Model Forest Network, Northern Europe and Russia, Regional Model Forest Network—Asia and Canadian Model Forest Network). (See the IMFN website for further details)

A couple of successes attributed to the IMFN include the revival of 1 214 sacred groves in India's Kodagu Model Forest and the creation of the 730 000 hectare. Pechoro-Ilychsky Reserve in Russia's Komi Model Forest (Bonnell *et al.*, 2012). The IMFN was able to flourish abroad in large part because the elements of the programme were already in place in those countries, and the IMFN served to organize them in a way that amplified their impact (Besseau, Dansou and Johnson, 2002). The flexibility of the approach, which permits it to adapt to local circumstances, was also considered an important element of success (Ibid). Three key pillars of the programme are partners, issues and tools. Typical partners found across all model forests include the Forest Department (generally identified as the national-level lead), other resource-based departments, research and academic partners, Indigenous communities, industrial logging interests, small businesses and civil society organizations. One major benefit of these partnerships has proven to be that they can help to organize actors to apply business skills and increase incomes. Equally, at the international level, the partnership approach across different model forests has also helped to promote cross-learning and experience-sharing. At the level of issues, model forests include "forest management practices; biodiversity and water protection and conservation; and sustainable resource-based economic development" (Besseau *et al.*, 2002).

Lessons emerging from the IMFN include the importance of site selection and the fact that the model forest approach is not universally suitable or applicable. Key elements of model forests include funding, leadership, national support, clear objectives and time (Besseau *et al.*, 2002).

A further review in Latin America of the regional model forest network identified the following lessons (Rojas *et al.*, 2020):

1. Finding convergence among stakeholder interests favours synergy.
2. Developing local leadership and local empowerment are key to a sustainable process.
3. Maintaining neutrality during the decision-making process fosters a sense of ownership of the platform by non-government stakeholders.
4. Leading, empowering and accompanying are three consecutive steps.
5. Sustainable development is achieved through real commitment from people in daily contact with their natural resources.
6. The management process relies on actual people.
7. Sustainability of the initiative requires independent administrative and financial management.
8. Communication within model forest management and among partner organizations is key.

***Who are the main stakeholders?***
Guidance on the model forest process states that boundaries must first be identified, and then the main actors can be determined. Actors may be at different scales both within and outside the model forest. Examples of stakeholders to involve in a model forest include: industry groups, community groups, Indigenous Peoples, government agencies (across different sectors), NGOs, academic and research institutions, national parks and private landowners (IMFN, 2019). In Canada, each model forest was coordinated via a new NGO established for that purpose. The IMFN was set up in 1992 to spread the model to other countries and coordinate across model forests. Today, there are also regional model forest networks.

***How is the territory framed?***
Although initially intended to follow ecoregional boundaries, in practice several model forests were framed around forest management licence boundaries (Bullock, Jastremski and Reed, 2017). Guidance on setting up a model forest outlines that the boundaries may be determined by one of three options: an ecosystem feature (for example, a watershed), an administrative unit (such as a village) or a specific issue (such as an endangered species). (See IMFN, 2019.)

***How are objectives set?***
The NGO setup was intended as a structure that facilitated discussions and negotiated objectives for the model forest. Objectives revolve around the management of the forest and economic options.

***What policies have supported the outcomes?***
No specific policies support or encourage model forests. However, the concept was prompted by criticism of the existing forest policy in Canada. As a result, the Government of Canada decided to support the development of this initiative. Model forests in Canada were intended to be pilot sites to test alternative forest management approaches.

***What tools are used for achieving desired objectives?***
The following tools have been typically used in the model forest process: effective participatory processes, GIS, indicators of sustainable forest management, public outreach and education, among others. Networking is a central feature of the IMFN where lessons and experiences are exchanged across model forests to enrich the approach.

### 2.1.2. Commonland

By 2040, the Commonland foundation aims to have transformed 100 million hectares of degraded land into thriving ecosystems, economies and communities working alongside conservationists, farmers, experts, entrepreneurs, community organizers, businesses, governments and finance professionals. These healthy landscapes are expected to feed their inhabitants through innovative agricultural practices while also improving their functioning and reducing greenhouse gas emissions (Commonland, 2021).

Commonland promotes a science-based framework that is built on four returns: Inspiration ("Giving people hope and a sense of purpose"); Social Capital ("Bringing back jobs, business activity, education and security"); Natural Capital ("Restoring biodiversity, soil, water quality and capturing carbon") and Financial Capital ("Realizing long-term sustainable profit" Commonland website). The framework breaks down the landscape into three zones: natural, economic and combined. In the natural zone, the focus is on natural capital and ecological foundations including investing in restoring vegetation through active and passive means that in turn provide the following returns: carbon capture, water quality improvement, soil stabilization, forestry growth and tourism revenue, among others. The combined zone focuses on regenerative agriculture, rotational grazing and agroforestry, and provides crops, fruit trees and non-timber forest products, among other returns. The economic zone focuses on sustainable economic activities and delivers on new businesses and economic development, as well as $CO_2$ capture and soil health improvements, among others.

Through this framework, Commonland establishes a participatory and long-term vision (for 20 years or more) together with communities, partners, funders, governments and other stakeholders. Actions that are carried out focus on participation and the integration of social, ecological and economic dimensions. The emphasis in this approach is on the landscape scale.

### *Example of Commonland: South Africa*

In South Africa, the project that began in 2009 and which Commmonland has been supporting since 2014 is situated in the Eastern Cape in the Langkloof – Baviaanskloof landscape. Here, Commonland worked with Grounded, a local NGO, to identify business opportunities and facilitate large-scale regeneration. It provided a loan of EUR 1.47 million to support the establishment of DevCo, a local company, that has enabled local farmers (through favourable loans) to develop alternative income-generating activities, notably through the production of essential oils such as rosemary and lavender. Three local companies have been set up through the project: (1) Baviaanskloof Development Company, a producer-owned company which focuses on the production, processing and sale of essential oils; (2) Baviaanskloof Bewarea Non-Profit Company, set up by a local NGO to carry out ecological rehabilitation work in the landscape; and (3) Langkloof Honeybush Company, set up and owned by Grounded, which specializes in sustainable honeybush tea production.

Concrete activities include planting the native Spekboom trees (*Portulacaria afra*) and removal of alien invasive species. Ponding is also being carried out to capture and retain water. Farmers are supported in developing alternative income sources, notably through the marketing of essential oils, among others, but also focusing on regenerative agriculture.

#### *Who are the main stakeholders?*

Commonland works with numerous landscape stakeholders. In the case of South Africa, key actors were farmers, local NGOs (including Grounded and Living Lands) and local companies.

***How is the territory framed?***
The landscape is defined with partners using criteria that they develop jointly. Ecological features, administrative aspects or topography for example, can be used to define the landscape. The boundaries however, are not set in stone and are divided into three zones (natural, economic and combined). The boundaries of the landscape in South Africa have evolved from an initial 41 000 to over 500 000 hectares (Commonland website). This illustrates the dynamic nature of the boundaries of a landscape, which may be adjusted based on the actors and stakeholders engaged.

***How are objectives set?***
The Commonland approach begins with a participatory, long-term (20-year) vision-setting exercise for the landscape, which frames the overarching objectives. The objectives are then set along the four returns (that is, natural capital, social capital, financial capital and inspiration).

***What policies have supported the outcomes?***
No specific policy enables the Commonland approach.

***What tools are used for achieving desired objectives?***
The four returns framework provides a series of tools for the Commonland approach. In the specific case of South Africa, the creation of new business ventures and microfinance institutions have been central to helping local farmers change their way of cultivating and managing the landscape.

### 2.1.3. International Partnership for Satoyama Initiative

*Satoyama* signifies rural landscapes in Japanese and comes from the words "Sato" meaning village and "yama" meaning hill or forest (Koike, 2014). *Satoyama* landscapes are viewed as social-ecological mosaic landscapes where the relationship between nature and people can thrive in harmony. In an effort to revive the traditional rural landscapes of Japan, the Ministry of the Environment launched the *Satoyama* Conservation and Rehabilitation Model Programme in 2004 (Koike, 2014). In 2008, the Government of Japan passed the Basic Law on Biodiversity which included *Satoyama* areas (Ibid.). In 2010 the *Satoyama* Initiative was launched between the MOE and the United Nations University (Takeuchi, 2010) and the International Partnership for the Satoyama Initiative (IPSI) was established during the 10th Conference of the Parties to the Convention on Biological Diversity held in Japan in 2010. *Satoyama* initiatives are also described as Socio-Ecological Production Landscapes and Seascapes (SEPLS).

Initially, the IPSI focused on ten pilot countries (Brazil, Cambodia, Ethiopia, Fiji, Ghana, India, Malawi, Nepal, Slovakia and Türkiye), to which a further ten countries were added in 2013 (Bhutan, Cameroon, Costa Rica, Ecuador, El Salvador, Indonesia, Kyrgyzstan, Mongolia, Namibia and Niger) under the United Nations Development Programme (UNDP)/Government of Japan-funded project, Community Development and Knowledge Management for the *Satoyama* Initiative (COMDEKS). The aim of

COMDEKS was to support local communities in re-establishing production landscapes and seascapes, as well as to collect and disseminate knowledge and experiences.

Studies on SEPLS have identified six key areas for their success: (1) resource capacity within the carrying capacity of the environment; (2) cyclic use of natural resources; (3) recognition of the value and importance of local traditions and cultures; (4) multistakeholder participation and collaboration; (5) contributions to socio-economies; and (6) enhancing community resilience (United Nations University Institute for the Advanced Study of Sustainability [UNU-IAS] and the Institute for Global Environmental Strategies [IGE], 2019).

***Who are the main stakeholders?***

Multiple stakeholders are involved in *Satoyama* initiatives, from government ministries (in Japan) that provide direction through policies and incentives, to local farmers and landscape inhabitants who partner on the ground for local action. The IPSI is a partnership made up of hundreds of member organizations dedicated to working together to promote harmony between societies and nature.

***How is the territory framed?***

Traditionally, *Satoyama* landscapes were framed by the community and their surrounding environment, including forests, meadows and rivers. With people at the core, *Satoyama* are seen as cultural landscapes that reconcile nature and culture. Nevertheless, conservation priorities have often been used to define the *Satoyama* landscapes. In this respect, a Satoyama Index was developed to define priority areas based on ecological characteristics (Natori and Hino, 2021).

***How are objectives set?***

Community consultations are central to defining priorities for *Satoyama* landscapes. Nevertheless, decisions are influenced and made by actors situated at different administrative, geographical and cultural scales who are stakeholders in the given landscape. Experiences from *Satoyama* initiatives indicate the iterative nature of decision-making (UNU-IAS and IGES, 2019).

***What policies have supported the outcomes?***

In Japan, the 2008 Basic Law on Biodiversity included *Satoyama* areas. The Ministry of Agriculture, Forestry and Fisheries provided direct financial support to farmers that emphasized the multifunctionality of agriculture. At the same time, the Ministry of Land, Infrastructure, Transport and Tourism used *Satoyama* to promote green spaces in urban areas, and the Ministry of Internal Affairs and Communications supported local governments in promoting rural development programmes such as ecotourism, in *Satoyama* areas. At the local level, municipal and prefectural governments have also enacted by-laws to conserve rural landscapes. For example, in 2007 the Kanagawa prefecture enacted a *Satoyama* Conservation By-law "to rehabilitate, conserve, and develop *Satoyama* areas through the collaboration of farmers, landowners, local action groups and municipal and prefectural governments" (Koike, 2014).

***What tools are used for achieving desired objectives?***
The IPSI promotes five types of activities: knowledge facilitation, policy research, indicators research, capacity building and on-the-ground activities (IPSI Secretariat, 2014). In Japan, financial incentives were established for *Satoyama* initiatives. Local action groups are also a key mechanism in implementing *Satoyama* landscapes (Ibid).

### 2.1.4. Global Landcare

The Landcare programme began in Australia, specifically in the states of Victoria and Western Australia, in the late 1980s to tackle common environmental problems and reverse land degradation on farmlands. It takes place on both public and private lands and emphasizes farming improvements to reduce land degradation and protect biodiversity (Global Landcare website).[3] At the time, another trigger for the programme was the government's desire to be more cost and time efficient by providing support to groups of farmers rather than offering individual extension services (Dale *et al.*, 2022). The essence of Landcare is the formation of voluntary groups of like-minded land users seeking to tackle common problems. The first group, which still operates today, was formed in Winjallok (Victoria) in 1986 and received USD 200 000 from the Victorian Government in 1986–1987 (Catacutan *et al.*, 2009).

In 1989, the Australian prime minister launched a nationwide decade of Landcare (Dale *et al.*, 2022) and committed USD 360 million to the programme (Curtis and Lockwood, 2000). The National Landcare Programme was launched four years later in 1993 (Catacutan *et al.*, 2009). After five years the programme included 6 000 Landcare groups in Australia, involving more than one-third of all farming families in the country (Curtis and Lockwood, 2000). The unlikely alliance between farmers and conservation organizations in Australia was highlighted by Dale *et al.* (2022) with two of the strongest lobby groups in Australia representing farmers (National Farmers' Federation) and conservationists (Australian Conservation Foundation) joining forces under Landcare. The government delineated 56 natural resource management units, based on catchments and bioregions, that have served as a basis for delivery of its involvement in the Landcare programme (Australian Government website).

Key principles of the Landcare approach include "enrichment of human and social capital to mobilize local actions to reverse land degradation issues and improve rural livelihoods, with emphasis on local demand, volunteerism, genuine participation, effective partnerships and support from beyond the local level" (Catacutan *et al.*, 2009: 8).

The Landcare process has been called "state-sponsored community participation" (Curtis and Lockwood, 2000: 62) reflecting the top-down and bottom-up links in Landcare programmes. At the centre of Landcare are community groups that come together to identify priorities, define actions and debate resource management issues (Curtis and Lockwood, 2000). Subsidiarity is a critical cornerstone of Landcare. District-based support staff members who act as coordinators of the programme are key elements in the process (Dale *et al.*, 2022). Often, they are members of the community who already have the trust of local members.

[3] Global LANDCARE. n.d. Welcome to Global Landcare.

In 1998, the Secretariat for International Landcare (SILC) was set up to coordinate the expansion of the approach to different countries. Each country adapted the Landcare approach to its own circumstances (Prior, 2013). In 2004, Landcare International was established as "a professional association of individuals (and institutions) committed to the principles, philosophy and practices of Landcare, to champion and raise the visibility of the Landcare movement at the global level, and the need to further spread adoption of the Landcare approach" (Catacutan *et al.*, 2009). Landcare International was hosted by the World Agroforestry Centre in Kenya.

Today, the Landcare approach exists in over 20 countries and operates under the banner of Global Landcare. In 2020, SILC merged with Australian Landcare International and Landcare International to form Global Landcare (Global Landcare website). Global Landcare is a worldwide network that aims to "promote, demonstrate, and strengthen Landcare values and approaches for local, community-driven solutions for protecting, managing, and enhancing sustainable management of natural capital assets" (Global Landcare website).

Some of the key lessons emerging from a review (Catacutan *et al.*, 2009) of several Landcare initiatives around the world are: the value of community ownership (of both the problems and the solutions); the importance of participation and multistakeholder engagement; and flexibility and adaptive learning, among others. Concerns have been raised (in Australia) that Landcare shifts the responsibility from government to communities and that it focuses more on land productivity than on biodiversity conservation (Curtis and Lockwood, 2000).

***Who are the main stakeholders?***

The main actors are farmers and landowners. However, a critical component of Landcare is partnerships between diverse stakeholders. These include other community members and local authorities, as well as local businesses. Landcare groups have formed among farming communities, but also in urban areas, and their sizes vary from a handful of members to over 100. At the international level, Landcare is present in more than 20 countries under the umbrella organization, Global Landcare.

***How is the territory framed?***

Landcare groups evolve organically as farmers or other community members come together to address a common interest, such as the degradation of their common landscape. As such, the territory evolves and may be limited to the neighbouring farms or to the broader watershed. Guidance from Landcare Australia on setting up a Landcare group states that they "can be formed around location (e.g. your local park or nature reserve), topic (e.g. habitat restoration), or campaign (e.g. nest box installation)" (Landcare Australia website).

***How are objectives set?***

Landcare associations are established as non-profit entities that represent the actors engaged in any given Landcare programme. These associations then serve to negotiate and develop a plan for the area or landscape. Landcare members, made up of public and

private sector representatives, conservationists and farmers, work together to negotiate agreed objectives for their landscape.

***What policies have supported the outcomes?***
In Australia, the launch of the decade of Landcare with associated funding of USD 360 million helped to spur the programme. This was followed by the National Landcare Programme launched in 1993. In each case, resources (financial and other) were associated with the programmes.

***What tools are used for achieving desired objectives?***
Landcare groups form the main bodies that bring stakeholders together to discuss their common issues and come up with solutions. Projects can be developed under the banner of Landcare groups and funded by the government or other bodies. Specific tools depend on local contexts. For example, in Mindanao in the Philippines, simple conservation technologies were promoted among farmers by World Agroforestry, such as the establishment of narrow contour strips of vegetation (grasses, herbs or other plants, such as bananas and pineapples) to serve as buffers to control runoff and reduce soil erosion (ACIAR website).

### 2.1.5. Man and Biosphere Reserves

The Man and Biosphere (MAB) Programme of UNESCO was set up in 1970. It followed from the 1968 Intergovernmental Conference of Experts on the Scientific Basis for Rational Use and Conservation of the Resources of the Biosphere (which became known as the Biosphere Conference) organized by UNESCO, with the active participation of the United Nations, FAO and the World Health Organization (WHO), and in cooperation with International Biological Programme and the World Conservation Union (IUCN) (UNESCO, 2006; Bridgewater, 2016). This conference, which came four years before the Stockholm Conference on the Human Environment, was the first to highlight the need to address environmental problems, and that interdisciplinary approaches should be applied. The objective of MAB was "to develop the basis within the natural and social sciences for the rational use and conservation of the resources of the biosphere and for the improvement of the global relationship between man and the environment; to predict the consequences of today's actions on tomorrow's world and thereby to increase man's ability to manage efficiently the natural resources of the biosphere" (UNESCO, 2006). Four years later, in 1974, a UNESCO-United Nations Environment Programme (UNEP) Task Force convened to draw up objectives and characteristics for biosphere reserves. These are still valid today, and cover "the three basic needs of conservation, development and logistical support" and the zoning pattern described below (UNESCO 2006).

Today, MAB is a network of 748 sites or regions designated by UNESCO in 134 countries, including 22 transboundary sites (UNESCO website). The state aim of MAB is to be an interdisciplinary effort across natural and social sciences. As part of intergovernmental processes, the programme enables governments to nominate sites

that are then reviewed and approved by MAB's International Coordinating Council, officially endorsed by the director general of UNESCO, and are then internationally recognized.

Although MAB initially focused on research, by 1974 the idea of applying the approach to biosphere reserves emerged. These were selected as being "global ecosystems in which biodiversity conservation was combined with satisfying basic needs of local people and simultaneously accommodating ecological research and training" (Bridgewater, 2016). These reserves are seen as "learning places" where an integrated approach across natural and social sciences can be tested and can evolve, to find viable solutions that reconcile biodiversity conservation and the sustainable use of natural resources (UNESCO, MAB webpage). Each biosphere reserve has three zones: a core zone that is often a strictly protected area, a buffer zone that is "used for activities compatible with sound ecological practices that can reinforce scientific research, monitoring, training and education" and a transition zone where communities can carry out sustainable activities (UNESCO, MAB webpage). These three zones reflect MAB's three key functions: conservation of biodiversity and cultural diversity; economic development that is socio-culturally and environmentally sustainable; and logistic support, underpinning development through research, monitoring, education and training (UNESCO, MAB webpage).

Both the ecosystem approach and systems analysis frameworks were given attention in the initial years of MAB, but were found to be disappointing. A stocktaking in 1981 revealed that the "use of systems analysis as an integrating tool had fallen short of expectations" (UNESCO, 2006). The same conference also found that of the three pillars of biosphere reserves, conservation was by far the most developed, with development and logistical support falling behind (UNESCO, 2006). The concept of networks of biosphere reserves, both regional and global, was also important early on, but took time to materialize.

Implementation at the national level is through MAB National Committees and MAB networks. These national level committees are intended to bring together individuals from diverse disciplines as well as relevant governmental and non-governmental institutions (UNESCO, 2006). At the international level, the International Coordinating Council, composed of 34 elected UNESCO Member States (represented by experts from the fields of ecology, natural sciences, agronomy, environment and social sciences) guides and supervises MAB (UNESCO, 2006).

The Seville Strategy launched in 1995 marked an important milestone, as it provides detailed guidance on criteria for formal designation of a Biosphere reserve. It also defined a Statutory Framework, which includes revised principles, criteria and designation procedures for biosphere reserves. Among the new criteria, the consideration of social, cultural, spiritual and economic needs was introduced, in addition to the use of scientific research (Bridgewater, 2016).

The challenges that affect the implementation of biosphere reserves include: the lack of a clear designation for the three zones; the weakness of stakeholder engagement; lack of inclusiveness of governance structures; insufficient financial resources; and an unclear exit strategy (Van Cuong *et al.*, 2017).

### *Example of Man and Biosphere: Case of Sian Ka'an Biosphere Reserve (Mexico)*

The Sian Ka'an Biosphere reserve was established in 1986 and covers a territory (on land and water) of 528 148 hectares (about one-third of the area comprises forests). It is situated in Mexico's Yucatan Peninsula in the State of Quintana Roo (UNESCO, MAB webpage) and 94 percent of the area is on public land (Brenner and Job, 2012). Mayan communities live inside the reserve, alongside immigrant communities for a total of about 1 000 inhabitants (Brenner and Job, 2012).

The main activities are lobster fisheries and tourism (Brenner and Job, 2012). Tourism interest – particularly from the larger resorts in the area – has also brought in many other stakeholders, with the result that the number of interested stakeholders has significantly increased in the last decades (Brenner and Vargas del Rio, 2010). Conflict between external environmental and tourism interests, and local interests have increased (Brenner and Vargas del Rio, 2010). These conflicts emerged to a large extent because of different worldviews, and nominal attempts at true participation (Martínez-Reyes, 2021). For example, while the NGO Amigos de Sian Ka'an helped locals set up ecotourism businesses, marketing problems resulted in a failure to attract tourists, and to compete with the large operators from the major resorts, such as Cancún and Playa del Carmen, thus leaving local communities feeling disillusioned (Martínez-Reyes, 2021).

Projects and external interventions were criticized for lacking an understanding of the social dynamics in the Mayan community and seeking to impose externally driven solutions (Martínez-Reyes, 2021). The Amigos de Sian Ka'an NGO was established by The Nature Conservancy of the United States, primarily to promote the reserve, and was then perceived as being a conduit for international funding to promote projects imposed from outside. In contrast, the U Yool Ché NGO, which emerged from a group of staff members from Amigos de Sian Ka'an, was perceived as being locally grounded and had the community's respect and trust (Martínez-Reyes, 2021).

***Who are the main stakeholders?***

At an international level, UNESCO has been the key organization. National committees help coordinate and implement biosphere reserves in-country. In the case of Sian Ka'an, five groups of actors can be identified: "(1) governmental and supranational institutions involved at different spatial and organisational levels; (2) national and international environmental non-governmental organizations [ENGOs]; (3) businesses (private sector and community- or state-owned); (4) local population and resource users; and (5) tourists" (Brenner and Job, 2011). Amigos de Sian Ka'an and U Yool Ché, two local NGOs, were also key actors (Martínez-Reyes, 2021). The National Autonomous University of Mexico was also involved in supporting the Mayan community with various planting techniques (Martínez-Reyes, 2021).

***How is the territory framed?***

Within a biosphere reserve, MAB outlines three zones, based around a strictly protected core area. The next two zones are a buffer zone and a transition zone. Despite starting with an ecological space, MAB developed around the spatial unit of a "human use system" (UNESCO, 2006). This social-ecological space permits the reconciliation of the social and natural sciences.

***How are objectives set?***

The MAB national committees help to define objectives and implementation. In the case of Sian Ka'an, many of the objectives set for the reserve were external. For example, development of the tourism industry was introduced as an alternative income-generating activity. However, its lack of success reflected that it had not been well designed or rooted in local practice.

***What policies have supported the outcomes?***

Because biosphere reserves are closely related to protected areas, policies associated with protected areas also impact on these reserves. In Mexico, the Sian Ka'an reserve was declared following a government decree. Mexico's tourism sector is particularly important, and this has been a sector which has had multiple impacts (positive and negative) on the biosphere reserve.

***What tools are used for achieving desired objectives?***

In 2017, UNESCO developed Technical Guidelines for Biosphere Reserves, a living document intended to support governments and other stakeholders to design and develop biosphere reserves. It addresses the following dimensions: "nomination, revision and review of a biosphere reserve, and the following priority areas: size and zonation; governance; plans, policies and strategies for biosphere reserves; monitoring and evaluation in biosphere reserves; and networks and partnerships to support biosphere reserves" (UNESCO, 2021).

## 2.2. INTERNATIONAL APPROACHES

### 2.2.1. Forest landscape restoration

Forest landscape restoration (FLR) is a process that focuses on restoring landscape functionality for the benefit of people and biodiversity (Besseau, Graham and Christophersen, 2018). Its emphasis is on the landscape scale where trade-offs can be negotiated. Although purposefully vague, the landscape scale is seen as an area where several stakeholders interact and can find agreement on objectives for the landscape to be restored (Stanturf, Mansourian and Kleine, 2017). The FLR approach was first defined in 2000 (Stanturf, Mansourian and Kleine, 2021) and has since been promoted widely. Guidance has been developed to support practitioners when designing and implementing FLR projects (IUCN and WRI, 2014; Stanturf *et al.*, 2017; ITTO, 2020). The approaches they outline vary to the extent that they are top-down versus bottom-up. Landscape maps support national decision-making for FLR by identifying, for example, restoration priorities (for example, through the Restoration Opportunities Assessment Methodology or ROAM; IUCN and WRI, 2014). Maps may also be used within the priority landscapes together with local stakeholders to develop zones for restoration, protection and other categories within the landscape that support the overarching intent to restore the landscape, as was done in Madagascar's Fandriana-Marolambo landscape (Mansourian, Razafimahatratra and Vallauri, 2018). There is no single approach to FLR, however, the Global Partnership on FLR (GPFLR) has defined six key principles (Besseau, Graham and Christophersen, 2018). See Box 4.

BOX 4

**Forest landscape restoration principles**

**Principle 1** – Focus on landscapes
**Principle 2** – Engage stakeholders and support participatory governance
**Principle 3** – Restore multiple functions for multiple benefits
**Principle 4** – Maintain and enhance natural ecosystems within landscapes
**Principle 5** – Manage adaptively for long-term resilience
**Principle 6** – Tailor to the local context using a variety of approaches

*Source:* Besseau, P., Graham, S. & Christophersen T. 2018. Restoring forests and landscapes: the key to a sustainable future. Global Partnership on Forest and Landscape Restoration. Vienna, International Union of Forest Research Organizations (IUFRO).

FAO's Forest and Landscape Restoration Mechanism (FLRM) was set up in 2014 to scale-up, monitor and report on FLR activities (FAO, FLR webpage). It is an important international player in FLR and supports projects in several countries, as well as developing tools and capacity at an international level for FLR implementation, notably under the United Nations Decade on Ecosystem Restoration, for which it leads the task forces on monitoring and best practices. The United Nations Decade of Ecosystem Restoration runs from 2021–2030 was proclaimed on 1 March 2019, with the aim of supporting and scaling up efforts to prevent, halt and reverse the degradation of ecosystems worldwide and raise awareness of the importance of successful ecosystem restoration. Ten principles guide the implementation of the United Nations Decade Strategy (FAO, IUCN CEM and SER, 2021; see Box 5):

BOX 5

**Ten guiding principles for the United Nations Decade on Ecosystem Restoration**

**Principle 1** – Ecosystem restoration contributes to the Sustainable Development Goals and the goals of the Rio convention.

**Principle 2** – Ecosystem restoration promotes inclusive and participatory governance, social fairness and equity from the start and throughout the process and outcomes.

**Principle 3** – Ecosystem restoration includes a continuum of restorative activities.

**Principle 4** – Ecosystem restoration aims to achieve the highest level of recovery for biodiversity, ecosystem health and integrity, and human well-being.

**Principle 5** – Ecosystem restoration addresses the direct and indirect causes of ecosystem degradation.

**Principle 6** – Ecosystem restoration incorporates all types of knowledge and promotes knowledge exchange and integration throughout the process.

**Principle 7** – Ecosystem restoration is based on well-defined short-, medium- and long-term ecological, cultural and socioeconomic objectives and goals.

**Principal 8** – Ecosystem restoration is tailored to the local ecological, cultural and socioeconomic contexts, while considering the larger landscape or seascape.

**Principal 9** – Ecosystem restoration includes monitoring, evaluation and adaptative management throughout and beyond the lifetime of the project or programme.

**Principal 10** – Ecosystem restoration is enabled by policies and measures that promote its long-term progress, fostering replication and scaling-up.

*Source:* FAO, IUCN CEM & SER. 2021. Principles for ecosystem restoration to guide the United Nations Decade 2021–2030. Rome, FAO.

### *Madagascar case*

The Fandriana-Marolambo landscape in Madagascar comprises an area of 200 000 hectares, with about 150 000 inhabitants from three different ethnic groups. The FLR project aimed to restore the goods and services provided by forests in the landscape. Initially a four-year project, it was extended for several additional phases, for a total of 13 years (2004–2017). Throughout these different phases emphasis was placed on engaging with the local authorities and local communities to reduce the impact of livelihood activities on the forests by providing alternative livelihood options, such as beekeeping, pig rearing, essential oils production and improved rice cultivation. Another key set of actions was to improve awareness and knowledge to restore parts of the landscape both passively and actively (Mansourian, Razafimahatratra and Vallauri, 2018). A lesson-learning exercise served to capture key lessons emerging from the 13-year project and highlighted the importance of planning at the landscape level but then carrying out actions at the local level. It also highlighted the importance of long-term engagement, as well as acknowledging the social dimensions of FLR (Ibid.).

In Fandriana-Marolambo FLR benefitted substantially from the co-management law first defined in Madagascar in 1996, the *"Gestion Locale Sécurisée"* or GELOSE, which was then complemented in 2001 by the *"Gestion Contractualisée des Forêt"* (GCF) specifically for forests. To apply GELOSE, five key elements need to be in place: (1) a management transfer contract (which is usually valid for three years and is renewable); (2) new institutions that re-group community members (*"Communautés de Base")*; (3) community rules (the dina in Malagasy); (4) an environmental mediator (often an international NGO); and (5) relative land tenure securitization (Pollini and Lassoie, 2011). In the framework of FLR, similar contracts were used, with additional clauses related to restoration. These co-management arrangements have enabled several hundred communities to be recognized as active participants in forest management. In practice, these approaches have also been criticized for failing to fully delegate power to local communities, for maintaining power among a few political elites, and for using locally inappropriate methods, such as GIS mapping (Pollini and Lassoie, 2011).

#### *Who are the main stakeholders?*

In FLR more broadly the initial actors (in 2000) were the World Wide Fund for Nature (WWF) and IUCN (Mansourian, Walters and Gonzales, 2019). The GPFLR, established in 2003, initially brought in the British Government. Gradually the GPFLR brought in more agencies and governments. Thus, actors were no longer only from civil society and research organizations, but also governments. The Bonn Challenge, "a global goal to bring 150 million hectares of degraded and deforested landscapes into restoration by 2020 and 350 million hectares by 2030" launched by IUCN and the German government pursued this political trend. In practice, in many landscapes where FLR is implemented, actors at various scales interact – from the national government to private sector interests and local farmers.

In the Fandriana-Marolambo case the main actors have been WWF, local authorities and local associations in the landscape as well as farmers. WWF initiated the project

(with funding from the French Ministry of Foreign Affairs). Local facilitators have been important in providing a link between the project and the local communities. Local authorities, in particular local mayors, have been supportive of the project and were critical in translating some aspects of it into practice, notably by integrating elements into local development plans.

***How is the territory framed?***
The projects tend to have vague and flexible definitions of the boundaries of the landscape. In the case of forest management, the landscape was framed based on a core area (the Marolambo National Park) and the surrounding watershed. This framing was carried out during a workshop in the capital city, Antananarivo, which led to the development of the project.

***How are objectives set?***
A number of tools (particularly mapping tools) have been developed to help define FLR objectives. For example, the IUCN/WRI ROAM provides a methodology to identify priority areas for forest restoration in a given country and landscape, and eventually to help frame specific forest restoration objectives within the landscape.

In Madagascar, objectives for the landscape were set around the two key dimensions of FLR, namely improving ecological functionality and enhancing human well-being. An initial reconnaissance visit was carried out before the project document was drawn up in order to better understand the landscape and ground the objectives in the local reality.

***What policies have supported the outcomes?***
Although not legally binding, the Bonn Challenge on FLR launched in 2011 has raised the profile of FLR and generated momentum for national and local implementation. In addition, countries have committed to restore at least 30 percent of all degraded ecosystems (target 2 of the Global Biodiversity Framework). In Madagascar, the GELOSE and GCF co-management laws are essential policies that have been used in the project and have helped to support its outcomes. The contracts established through these co-management laws were used to integrate restoration elements. Also, the translation of some aspects of FLR into local development plans served to better ground it in local priorities.

***What tools are used for achieving desired objectives?***
Alternative income-generating activities were critical in the forest management landscape to reduce pressure on the remaining forests and to improve the way land and forests were managed. This also required capacity strengthening, notably in the different ventures (such as beekeeping and aromatic herbs) and in tree nurseries and improved rice cultivation. More generally, other examples of FLR projects (see Mansourian, Diederichsen and Vallauri, 2021; Mansourian and Vallauri, 2022) also indicate the importance of developing alternative income-generating activities to reduce ongoing pressures on forests (thereby enabling natural regeneration as well as ensuring the success of any restoration activities rather than a return to pre-intervention conditions). Mapping tools are being used to identify

priority sites for restoration and to measure progress. In Brazil, the International Institute on Sustainability (IIS) has developed a decision-support tool entitled WePlan (WePlan, n.d. Website) to assist in identifying priority areas for tropical and subtropical forest restoration. FAO's FLRM is emphasizing, notably, capacity strengthening and monitoring for FLR.

### 2.2.2. Jurisdictional – Reducing emissions from deforestation and forest degradation

Reducing emissions from deforestation and forest degradation (REDD+), plus the sustainable management of forests, and the conservation and enhancement of forest carbon stocks, is a framework negotiated under UNFCCC to facilitate intergovernmental cooperation on forests and climate change. This mechanism was designed to be voluntary and nationally driven to enable developing countries to receive results-based payments for emission reductions when they reduce deforestation (Parrotta *et al.*, 2022). With deforestation responsible for an important share of global greenhouse gas emissions, the Intergovernmental Panel on Climate Change (IPCC) made it clear in 2019 that without action on forests, the world would not be able to achieve the 1.5°C target in the Paris Agreement. The REDD+ mechanism is implemented in three phases. This includes developing a national strategy or action plan, establishing a national forest monitoring system and a forest reference emission level, and putting a safeguards information system into practices. The next stage requires the implementation of national strategies or action plans, and the final stage is results-based actions that should be fully measured, reported and verified, allowing countries to seek and obtain results-based payments. To date, 13 countries have "registered results under the **Lima REDD+ Information Hub** for progress made in the last decade" (Granziera, Hamrick and Comstock, 2021). Thus far, most of the payments for results (approximately USD 929 million during the 2011–2019 period), have come from the Forest Carbon Partnership Facility (FCPF), the UN-REDD Programme and the Forest Investment Programme of the Climate Investment Funds (McDermott *et al.*, 2022). Usually, REDD+ credits on the voluntary carbon markets have been issued for REDD+ activities focused on a defined area of forest. These results can be at a jurisdictional scale (national or subnational), nested (with multiple scales involved), or at the project level, which is generally led by non-governmental or private actors who sell credits to buyers outside of the government context (Granziera *et al.*, 2021). For example, the World Bank developed the FCPF while Verra, a non-profit and non-governmental organization registered in Washington, developed the Jurisdictional and Nested REDD+ designed specifically to facilitate private sector investment in REDD+ at multiple scales (Granziera, Hamrick and Comstock, 2021).

Challenges identified for REDD+ include, for example, the need to improve cross-sectoral institutional coordination, engage with sectors outside forests, adopt and implement a multiscale approach as well as with other global forest-related conventions and trends. Another challenge relates to the importance of securing both carbon and non-carbon benefits through the operationalization of social and environmental safeguards (Mansourian *et al.*, 2022). Nine lessons have been identified from REDD+ to date: (1) the need to address drivers of deforestation and forest degradation at multiple levels of

governance; (2) the need for a better understanding of power relations between different actors; (3) the importance of tenure rights and accountability of in-country stakeholders; (4) the importance of the rights and knowledge of IPLCs; (5) the importance of the non-carbon benefits of forests, particularly as they provide direct and indirect benefits for IPLCs; (6) the understanding that subnational jurisdictional approaches to REDD+ are an important pathway for broader uptake; (7) the need for a stepped approach to operationalize safeguards; (8) the need to improve communication, capacity building and engagement; and (9) the need to facilitate coordination and collaboration across scales and actors (public and private) (Mansourian *et al.*, 2022).

BOX 6
**Milestones in REDD+ in 2022**

As of September 2022, the following United Nations Framework Convention on Climate Change (UNFCCC) Reducing emissions from deforestation and forest degradation (REDD+) reporting milestones had been reached:

- Since 2014, **56 countries** had submitted **75 reference levels** to the UNFCCC (covering a forest area of approximately **1.35 billion hectares** (33 percent of global forest area).
- Since 2014, **18 countries** had reported **REDD+ results** to the UNFCCC through **27 results submissions**.
- The combined reported REDD+ results total **11.5 billion tonnes of carbon dioxide equivalent** (tCO2eq) achieved between 2006 and 2020, which correspond to an average of 765 million tCO2eq per year. Brazil reported the majority (82 percent) of reductions.
- The **UNFCCC Info Hub** listed **386 million tCO2eq** of REDD+ results to have been **awarded results-based payments** for results achieved between 2006 and 2016 in seven countries (Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador and Indonesia).

*Source:* Sandker, M., Neeff, T., Todd, K., Poultouchidou, A., Có ndor-Gó lec, R., Felicani-Robles, F., Santos-Acuñ a, L. & Duchelle, A. 2022. From reference levels to results: REDD+ reporting by countries – 2022. Update. Forestry Working Paper

There has been increasing interest in tackling deforestation and forest degradation at a jurisdictional scale. Working at the jurisdictional level will help to overcome the shortcomings of project-based approaches while focusing on different types of land use and with multiple stakeholders. The case of Acre in Brazil, one of the most recognized jurisdictional approaches to REDD+, is presented here as a specific example.

### *Example of Jurisdictional REDD+: case of Acre*

The state of Acre in Brazil enacted a State System of Incentives for Environmental Services (SISA) programme in 2010, in which REDD+ policies were later included. It was lauded as the "world's first jurisdictional REDD+ programme" (Duchelle *et al.*, 2014)

and provides an institutional umbrella for the provision of forest-based environmental services. In fact, SISA is a state policy that includes seven programmes, one of which relates to REDD+ (ISA Carbono) by providing incentives for the conservation of environmental services such as carbon (Guerra and Moutinho, 2020). Income from its rich forest resources has prompted the state of Acre to engage in REDD+ (Da Conceição and Börner, 2020). Also, the tight link between forests and human well-being in Acre served to generate further interest in REDD+, which was seen as a way to marry the two concerns (Da Conceição and Börner, 2020). Four subprogrammes make up the ISA Carbono programme, based on their target audiences: (1) smallholder farmers in rural settlement areas aiming to reduce emissions from land use, (2) small- to medium-sized cattle ranchers also aiming to reduce emissions from land use, (3) rubber tappers and smallholders in extractive reserves through sustainable-use conservation areas, and (4) indigenous territories aiming to maintain forest carbon stocks (Bidone, 2021).

Acre's REDD+ programme received funding from the German Government. In 2012, the Federal Ministry for Economic Cooperation and Development allocated EUR 16 million in results-based financing through the German REDD Early Movers programme. In 2013, the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection awarded an additional EUR 9 million for results-based payments (KfW Development Bank, 2017). Between 2005 and 2017, Acre reduced deforestation by approximately 60 percent (Schwartzman, 2021) and avoided the emission of 6.5 million tCO2 for four years (Guerra and Moutinho, 2020). A new phase of funding was signed at the end of 2017 with both the German and British Governments. Furthermore, being part of the Governors' Climate and Forests Task Force (GCF), an international–subnational collaboration among 22 states and provinces, has provided support and visibility to Acre (Duchelle *et al.*, 2014).

***Who are the main stakeholders?***

Actors operate at multiple scales, from the national governments negotiating REDD+ at international meetings, down to local communities engaging (or not) with field-based activities under REDD+. The Cancún safeguards agreed to in 2013 highlight the importance of "The full and effective participation of relevant stakeholders, in particular Indigenous Peoples and local communities" (UNFCCC Decision 1/CP.16, Appendix I, paragraph 2). In the case of Acre for example, several state agencies were involved: for remote sensing – the Central Geoprocessing and Remote Sensing Unit (UCEGEO) to monitor deforestation within the state; the Commission for Validation and Accompaniment, which monitors SISA and approves regulations, norms and implementation approaches; and the Company for the Development of Environmental Services, a private-public entity made up of four civil society organizations and four governmental organizations and charged with assisting with financing, including through the sale of carbon credits (Duchelle *et al.*, 2014; Da Conceição and Börner, 2020). In Acre, a Climate Change Management Committee is made up of several government agencies that are responsible for enforcement and sustainable production initiatives. These agencies include the agency responsible for rural technical assistance (State Secretariat of Family Production and Rural Extension), Acre's Land

Institute that is responsible for land tenure regularization, and UCEGEO, the remote sensing institute (Duchelle *et al.*, 2014). The issues covered by these institutions reflect some of the challenges under REDD+, namely related to reducing pressure on forests through alternative livelihoods, clarifying land tenure and measuring forest cover changes.

***How is the territory framed?***
Mainly, REDD+ operates at multiple levels. In general, it may operate at the national or subnational level or at the level of a project nested within a national or subnational framework. In the case of Acre, it operates at the state level.

***How are objectives set?***
The REDD+ objectives are set within national programmes that are generally aligned with nationally determined contributions (NDCs) under the UNFCCC. Within the framing of the specific REDD+ scale (for example, subnational or project scale) consultations may be carried out to define the interventions that are feasible to reach a given level of carbon emission reductions from forests. Using an agreed baseline and measuring change are critical to receive funding under REDD+.

***What policies have supported the outcomes?***
International processes under the UNFCCC have prompted the adoption of REDD+ as an international tool to mitigate climate change through land-based interventions. Specifically in Acre, the SISA was created through State Law 2.308 (Government of Acre, 2010), which was passed in October 2010 (Duchelle *et al.*, 2014). In many instances, policies related to social and environmental safeguards may be necessary, as well as on clarifying land tenure.

***What tools are used for achieving desired objectives?***
A key tool under REDD+ is satellite-based remote sensing to monitor forest and tree cover change, as this is the central tenet of REDD+. In a broader sense, however, other context-specific tools include measures to promote alternative livelihoods (to reduce pressure on forests and land) and institutional setups to support stakeholders.

### 2.2.3. Indigenous and community conserved areas

The term "community-conserved areas" (CCAs) was coined at the Durban World Parks Congress in 2003 to recognize conservation areas that are not managed by governments. The following year, the term was reflected at the Convention on Biological Diversity's Conference of the Parties. While the term may be recent, the concept it describes is much older (Berkes, 2009). Today the abbreviation ICCA is used to refer to "territories and areas conserved by indigenous peoples and local communities" or "territories of life" (ICCA Consortium website).

The basic criterion for a territory of life is that IPLCs are custodians of the area (ICCA Consortium website). The ICCA Consortium defines custodianship of a territory as "conserving nature willingly, while living with it and from it, and holding it in trust for

future generations" (Sajeva *et al.*, 2019). This is in line with the first official recognition of IPLCs' custodianship role at the 1992 Rio Earth Summit.

Three key characteristics serve to identify an ICCA (Sajeva *et al.*, 2019): the close connection between the territory and an IPLC, stemming from the "history, social and cultural identity, spirituality and/or people's reliance on the territory for their material and non-material well-being"; decisions and rules about the territory are made and enforced by the community through a functioning governance institution; and both nature conservation and community well-being are enhanced through the governance and management processes applied.

Rather than a specific approach, ICCAs represent the recognition of a model of governance that is grounded in local institutions. Key elements of ICCAs are their support for securing the tenure rights of IPLCs to their land and natural resources; for balancing agricultural biodiversity and wildlife; participatory governance; integration of customary and statutory laws; preventing excessive urban migration; and serving as a foundation for cultural identity and pride for IPLCs (Sajeva *et al.*, 2019). It is estimated that ICCAs cover as much as 13 percent of the terrestrial surface of the planet (Ibid).

Importantly, ICCAs are built around a community's political and economic organization. These possess legitimacy among the community and are built on strong ancestral traditions that promote social cohesion. Furthermore, the links between natural and social systems are significantly stronger than in western, market-based economies.

Moreover, ICCAs have brought attention to the role of IPLCs in conservation more generally, including that of forests. For example, a study found that although less than 5 percent of the Indomalayan forests are considered intact, out of this area, 87 percent are on Indigenous Peoples' lands (Conlu, 2022). Furthermore, ICCAs have brought to the fore the importance of collective tenure rights and responsibilities. They have also re-centred environmental conservation (and environmental governance) to the local level.

Key threats to ICCAs are: land grabs or the expropriation of their territory; unsustainable use of resources by external interventions; undermining of traditional institutions; cultural erosion through external interventions; lack of recognition; conflicts; and disasters (Sajeva *et al.*, 2019).

***Who are the main stakeholders?***

Central actors in ICCAs are IPLCs. Within these groups, councils of elders, village assemblies or other traditional decision-making bodies might play a predominant role in governance (Sajeva *et al.*, 2019). Other actors include NGOs and authorities at different levels. As a network, the ICCA Consortium has played an important role in raising awareness at the international level about the importance of ICCAs and the challenges they face. They have also worked to promote a supportive international policy environment, build capacity at regional levels, and enhance visibility for emblematic ICCAs. To this end, UNEP and the World Conservation Monitoring Centre maintain an online registry of ICCAs (ICCA Registry webpage).

***How is the territory framed?***
As ICCAs are of diverse sizes they may be framed around a small feature such as the sacred value of a particular forest grove for example, or by a culturally defined territory spanning hundreds of thousands of hectares. In all cases, the cultural lens is critical in framing the landscape (although in many cases this may be closely associated with a natural feature). Because of their ecological importance, some of the older ICCAs were gazetted as national parks (Berkes, 2009).

***How are objectives set?***
Just as ICCAs are diverse, so are their objectives and the ways in which those objectives are set. Nevertheless, one common thread relates to the interdependence and interconnection between communities and their environment (Conlu, 2022). Overall, ICCAs aim to contribute to a world where territories of life and their Indigenous and local community custodians thrive through the exercise of their rights, responsibilities and self-determination, conservation of nature and biological and cultural diversity, and wellness of all beings (ICCA Consortium, 2023).

***What policies have supported the outcomes?***
At an international level the growing recognition of the rights of Indigenous Peoples and the growing recognition of their ancestral claims is starting to provide ICCAs with solid legal support for their official recognition. Their recognition by major environmental bodies such as IUCN and the Convention on Biological Diversity provides the environmental community with a mechanism to better acknowledge and work with IPLCs in conserving these areas.

***What tools are used for achieving desired objectives?***
In 2013, a toolkit was produced by UNEP and UNDP to attempt to systematize the ways in which ICCAs should be documented, managed, communicated, monitored and financed. It includes links to other relevant tools (Corrigan and Hay-Edie, 2013). Traditionally, the management of most ICCAs would have been transmitted intergenerationally through culturally relevant mechanisms.

## 2.3. LOCAL APPROACHES

### 2.3.1. Xingu – Brazil

The Xingu Indigenous Area, named after the Xingu River, a tributary of the Amazon, is situated in Brazil, straddling the states of Mato Grosso and Pará. The whole Xingu corridor was shaped by different government interventions, and today the Xingu Indigenous Area makes up close to 70 percent of the Xingu corridor. Within this huge basin (over 50 million hectares), the Parque Indígena do Xingu (PIX) or Xingu Indigenous Area was formally established in 1987 (Protected Planet website) and named as such in 2016 further to lobbying by the Xingu Indigenous communities. The PIX totals 2.64 million hectares and is inhabited by Indigenous Peoples from 16 different

communities (Equator Initiative, 2022, website). In 1984, the Associação Terra Indígena Xingu (Xingu Indigenous Land Association, or ATIX) was created to bring together different groups. Rules for the ATIX include that all 16 chiefs must be present for any decisions that are to be taken for the entire area. In 2015–2016 a management plan for the area was drawn up.

Although for decades the PIX was praised for maintaining forest cover, the area all around it has been subject to significant pressure. In the face of this pressure, Indigenous groups organized themselves to exclude others. They set up ten monitoring posts to patrol the boundaries of the park to deal with illegal logging and ranching pressures surrounding their land (Brondizio, Ostrom and Young, 2009). Two important business ventures were developed by the communities inside the park: one was for honey production and the other for seed collection (Brondizio, Ostrom and Young, 2009; Sanches, Futemma and Alves, 2021). In addition, ATIX developed a self-certification scheme for its honey production (Selo dos *Origens Brasil*) which enables it to sell up to two tonnes of honey annually to specific markets. It was awarded the Equator Prize in 2017. The Xingu Seed Network is an institutional structure that re-groups 568 seed collectors from 20 Indigenous villages. The Network helps to coordinate different activities, such as collecting, treating, supplying and selling seeds. These seeds are then used for forest restoration by various actors operating in the region such as PIX Indigenous Peoples, local rural producers, public officers and managers, teachers, family farmers, and NGOs (Sanches, Futemma and Alves, 2021).

In an effort to improve management and represent indigenous rights, in 1989 the Rede Xingu+ network was formed, that re-groups 25 Indigenous Peoples' organizations, traditional community associations and civil society institutions from across the basin. One member of Xingu+ is ATIX of Xingu+ as is the association of seed collectors.

The Xingu+ network at its last meeting in 2022 highlighted the continued presence of threats such as illegal mining and logging, often with the government's blessing. In this case, pressures from around the park and from the national level were felt within the PIX. The governance arrangement within the park that enabled the different communities to manage the park effectively has proven insufficient. During the Bolsonaro presidency, this region saw significant conflict with Indigenous communities, with 513 500 hectares being deforested in the Xingu basin (Global Atlas of Environmental Justice, n.d. website). The region faces external interests from the mining, hydroelectricity (with the Belo Monte power station established there in 2016), and cattle rearing sectors that are all associated with deforestation and violence against Indigenous communities.

***Who are the main stakeholders?***

The main actors are the 16 Indigenous communities living in the territory. These communities have organized themselves in a number of different associations, which in turn are re-grouped under the umbrella association Xingu+. In addition, the settlers and other interests surrounding the PIX have significant impact not only in the area around the zone, but also within the zone (through water pollution for example which is carried into the PIX). Other political actors are the central government, which, in

the early 2020s, played a role in incentivizing exploitation of the Amazon, and the government of the State of Mato Grosso which has centred its development model around the production and export of commodities based on forest conversion. Communities within ATIX began building horizontal linkages (with other communities surrounding PIX) and vertical ones with different government levels in order to reach agreements with different sectors impacting the PIX (Brondizio, Ostrom and Young, 2009). Other actors include the National Indian Foundation (FUNAI), NGOs, church-based movements, high-profile celebrities, Instituto Socioambiental and other scientists working in the area.

*How is the territory framed?*
The Xingu Indigenous Area is framed by the Xingu River and its basin, but also by the Indigenous Peoples living in the area. For this reason, a number of overlapping designations can be found, exemplifying the challenges of social-ecological systems.

*How are objectives set?*
The Indigenous communities developed a management plan for PIX in 2015–2016. As a result of this management plan, three decision-making levels were identified: (1) Indigenous Peoples, (2) regional, and (3) general. Traditional Chiefs play an essential role in decision-making but they are assisted by advisors. When decisions pertain to one single Indigenous group, all members of the community are expected to participate and support the Chief in taking a decision.

Decisions are taken by local Chiefs based on their customary knowledge of the forests and water resources that spans generations. In contrast, recent settlers around the PIX do not have the same knowledge or attachment to place and base their decisions exclusively on economic values (Brondizio, Ostrom and Young, 2009).

*What policies have supported the outcomes?*
The formalization of the Xingu Indigenous Park provided a legal framework for the Xingu Indigenous Peoples to develop their own actions to conserve and sustainably manage the park. The Brazilian Forest Code, which prompts reforestation in areas that have been deforested, provided the framework for the Xingu Seed Network to develop in response to the demand for seeds. At the same time, other contradictory policies, such as those promoting cattle farming and agriculture, and settlement into the forest areas have challenged the PIX. Government policies that have encouraged settlers to move into the Amazon, as well as encouraging agricultural production notably through supportive export policies, have contributed to the negative impacts on the PIX (Brondizio, Ostrom and Young, 2009).

*What tools are used for achieving desired objectives?*
The Xingu rely to a large extent on partnerships as a mechanism to agree on priorities and ensure that they have the power necessary to face strong vested interests. They developed a management plan for their park and have carried out participatory monitoring. Income-generating activities that value forests have also enabled these communities to spare their forest while ensuring their livelihoods.

### 2.3.2. Community Resources Management Areas (Ghana)

Community Resource Management Areas (CREMAs) in Ghana are an attempt to marry socioeconomic and conservation priorities in forested landscapes. Their origins can be traced back to the 1994 Forest and Wildlife Policy. Central to this policy was the need to improve management of forests outside protected areas – notably with the aim to reduce pressure on these protected areas (Ahmed and Gasparatos, 2020) through a community-based landscape management tool aimed at promoting the development of income generating activities from wildlife management, ecotourism, non-timber forest products, and responsible farming. Eight guiding principles can be found in this policy (Box 7).

BOX 7

**Guiding principles for community-based wildlife management**

1. **Valuation** – Effective management of wildlife is best achieved by giving it **value** for those who live with it.
2. **Beneficiaries** -– Those who live with and bear the cost of wildlife must be the primary **beneficiaries** of its management.
3. **Access and benefits** – The control of **access to and benefits** from wildlife, whether by the individual or collectively, must be determined by those who live with the resources.
4. **Intrinsic value** – Wildlife should be recognized in its own **right** as an integral and viable component of national land use policy.
5. **Uniqueness** – Wildlife is a **unique** natural resource offering various opportunities for sustainable rural development and economic utilization.
6. **Incentivizing sustainable management** – To create **incentives** for sustainable wildlife management at the community level, the authority to manage wildlife must be devolved to an appropriate representative community institution.
7. **Traditional authorities** – The **role of traditional authorities**, traditional knowledge and other cultural aspects in wildlife management should be recognized and encouraged. Such appropriate traditional institutions, knowledge and forms of management should be enhanced and incorporated into national strategies and wildlife management techniques.
8. **Women** – The **role of women** is central to achieving sustainable wildlife use. Women must be integrated into the development and implementation of wildlife management programmes at all levels.

*Source:* Ghana Wildlife Division. 2000. Wildlife Division Policy for Collaborative Community Based Wildlife Management. Accra.

In 2000, a Collaborative Resource Management Policy (CRMP) was adopted, and the Forestry Commission was tasked with implementing it. The Forestry Commission's guide to CREMAs define them as "geographically defined areas that include one or more communities that have agreed to manage natural resources in a sustainable way"

(Forestry Commission Ghana, 2004). The identification and creation of each CREMA falls to the Collaborative Resource Management Unit within the Wildlife Division, which is traditionally supported by development partners and NGOs (Ghana Wildlife Division, 2000).

The process to establish a CREMA involves: (1) defining governance structures; (2) developing and approving the constitution; (3) demarcating boundaries; (4) preparing by-laws to be approved by the district assembly; (5) receiving recognition from the wildlife division; and (6) devolving management authority by the Minister of Lands and Forestry.

The governance structure of a CREMA consists of three bodies. First, there is the Community Resource Management Committee (CRMC), which represents the interests of the community within the CREMA Executive Committee (CEC). There is one CRMC per community and its members are elected by the villagers. Second, the CREMA CEC is the operational arm of the CREMA and has its powers outlined in the constitution of the CREMA. It is made up of a representative of each CRMC. Finally, individual farmers or landholders within the landscape of the CREMA who represent its social group. They are the ones defining the constitution (rules and procedures) of the CREMA, which the other two bodies have to respect (Forestry Commission Ghana, 2004). The constitution is made up of an agreement and by-laws and must be submitted to the ministry responsible for lands and natural resources, which can then issue a certificate of devolution to the CREMA (Ahmed and Gasparatos, 2020). The CREMAs are seen as a collaborative management tool that is intended to benefit the community (notably through revenue associated with ecotourism). By 2017, over thirty CREMAs could be found in Ghana covering several hundreds of thousands of hectares (Adeyanju *et al.*, 2022).

In principle, CREMAs are intended to be a form of devolved governance whereby local communities are empowered to take decisions over the sustainable management of their natural resource. The policy framework is intended to facilitate this process. In practice, the CREMA process has been criticized for its devolution of power to NGOs and other private actors rather than communities, and its de facto appropriation of land from communities. Although CREMAs are intended to represent communal land, in practice elite capture has been an issue, notably with private operators receiving hunting or tourism licences for the CREMA (Ahmed and Gasparatos, 2020). Furthermore, the roles and responsibilities of these private actors remains weakly defined (Baruah, 2017). In the past, under the customary land tenure regime, communities had direct and legal access to private and common land (Ahmed and Gasparatos, 2020). In this respect, while the initial intent of the CREMAs was to improve local benefit-sharing for environmental management, such concerns have challenged this intent. There is no mechanism to compensate for the loss of land through the establishment of CREMAs (Ahmed and Gasparatos, 2020). Another challenge that has arisen is that of ownership over individual trees planted on land in CREMAs. The Forest Service has the right to grant (or not grant) permission to cut down trees on farmers' lands (who are seen as custodians of the land). With few exceptions, most CREMAs lack the long-term financial support they require (Adeyanju *et al.*, 2022)

***Who are the main stakeholders?***

The Wildlife Division set up the CREMA policy to be implemented by the Forestry Commission. Local Chiefs play a significant role in individual landscapes. The committees to manage the CREMAs are intended to be representative, with one of the principles for the CREMAs (see Box 7) encouraging the participation of women. Other important actors are traditional authorities (Adeyanju *et al.*, 2022). In practice, NGOs and other external resource partners have played a significant role in the establishment and running of CREMAs.

***How is the territory framed?***

Mostly CREMAs range in size between 2 046 to 40 000 hectares (Adeyanju *et al.*, 2022). The Wildlife Division drives the selection of sites for CREMAs. Initially these sites were chosen based on their proximity to protected areas as they were intended to relieve pressure on the protected areas. Other criteria include the natural value of the site, the organization of communities on the site, land tenure status, and local support (from both district authorities and traditional authorities), among others. For the actual delineation of the boundaries of the CREMA, a surveyor is called upon and together with representatives from the communities that constitute the CREMA, they map the boundaries.

***How are objectives set?***
The primary objective of CREMAs is the sustainable use of natural resources. Once a CREMA is legally established, in its first year it develops a development or management plan that defines specific objectives and outputs. These may relate to bushmeat for example, or to ecotourism. A series of incentives may be included to ensure that the objectives are met.

***What policies have supported the outcomes?***
The primary policy for the establishment of CREMAs is the 2000 CRMP, which in turn is framed by the 1994 Forest and Wildlife Policy. The 2012 Tree Tenure and Benefit Sharing Policy and the 2016 Tree Tenure and Benefit Sharing Framework provide important incentives for communities to plant trees as they can reap the benefits from them (whereby before, any tree planted was automatically the property of the state). These schemes were established in part in response to rules for REDD+ projects, but have benefitted community members and have encouraged forest restoration (Mansourian, Walters and Gonzales, 2019).

***What tools are used for achieving desired objectives?***
The main tools for establishing and running the CREMAs are the constitution and the management plan. In practice, these tools are often supported by an NGO that retains a major role in their development and often in their implementation. Actions on the ground vary significantly, with alternative income-generating activities (for example, the production of shea butter) being central to the sustainable use of natural resources in CREMAs.

### 2.3.3 Regional nature parks (France)

In 1967 the French president signed a decree establishing the legal entity of regional nature parks (*parcs naturels régionaux*), together with other denominations for protected areas outside of National Parks (Martinez *et al.*, 2007). The definition of a regional nature park is "a territory of one or more communes which presents a particular interest because of its natural and cultural value, for leisure, and tourism, and which warrants to be protected and organized" (translated from Fédération des Parcs Naturel Régionaux de France, 2007). These parks have three broad objectives: (1) provide large cities with recreational zones; (2) support rural sectors and find new development opportunities through the valuation of natural and cultural riches; and (3) preserve fauna, flora and landscapes. There are currently 58 parks across the country (Fédération des Parcs Naturel Régionaux de France, 2007, website).

A 1994 decree outlines five specific objectives for regional parks: (1) to protect national heritage, particularly through the appropriate management of nature and landscapes; (2) to contribute to rational land-use planning; (3) to promote economic, social and cultural development; (4) to attract, educate and inform the public; and (5) to conduct experimental or exemplary research and other actions (Buller, 2000). Park management is carried out by a *syndicat mixte* made up of government officials from the local

communes (villages) situated within the park and members of the departmental and regional councils, under guidance from a director and overseen by a committee. Plans for the park are approved by the state and the Minister of the Environment. The plan or charter includes current and proposed land use, and a three-year action plan with a budget (Buller, 2000).

The creation of a regional park follows a bottom-up process whereby regional and local institutions submit an application to the Ministry of the Environment. Each park develops its own charter, which outlines its specific objectives (Parra, 2010). It is generally drawn up for a period of 12 years. Once the charter period is over, a new request for an extension of the park's status, together with a new charter, have to be submitted to the Ministry of the Environment. The model promotes civil society participation from the creation of the park through to development of its charter, and implementation of the plan. The link to rural development is a strong incentive for broad participation, particularly in regions that have suffered from unemployment and outmigration.

There is a complex array of administrative layers in France, which multiply the actors engaged in territorial decisions and the implementation of those decisions. The territorial approach is strong in France and promotes the re-grouping of different communes (*groupements intercommunaux*) for specific projects, and the participation of civil society through different interest groups. Thus, these groupings may overlap with a territorial institution such as a regional nature park (Torre, 2011).

Situated within the European Union, France's legislation surrounding parks is also subject to European Union legislation. Funding for parks can come from diverse levels, from the European Union to the central government and the decentralized government (at the level of participating communes, cities, groupings of communes [*établissement public de cooperation intercommunale*, EPCI] departments or regions). Through EPCIs, the collaboration among communes sharing a territory is considered a significant asset of the regional nature park system as it helps to generate a common and shared political identity to better manage the territory (Buller, 2000).

### *Example: The Morvan regional nature park (Burgundy)*

The Morvan regional nature park was established in 1970. It is made up of agricultural land, wooded areas, wetlands and meadows. The territory of this park includes 133 communes over 324 900 hectares and a population of 71 877 inhabitants (Parc naturel régional du Morvan website). About 85 percent of the forests in the park are privately owned by 20 000 landholders, and vary greatly in size. A 2017 evaluation of actions on forest management revealed gaps that the current charter is aiming to address (Parc Naturel Regional du Morvan, 2020). Because of the large number of private forest owners, and pervasive poor forest practices (including clearcuts), the same evaluation highlighted that improvements were required in forest management.

In 2020, the park's charter was renewed for 15 years. Over 200 participants attended the meetings to develop the charter. To better reflect the role of civil society within the charter, a number of new bodies were proposed: a *Conseil associatif et citoyen* to provide advice on specific subjects, facilitate understanding of actions carried out by the park

and organize debates on specific themes, among others. This body is to be made up of a total of 30 people representing associations and citizens. Its final membership would be confirmed by the *comité syndical* where it would also be represented. A scientific committee provides advice, carries out research to guide the park. It also has a seat on the *comité syndical*. A number of cross-cutting commissions and working groups will also be set up to respond to specific issues. The general assembly of mayors meets once a year to discuss issues of relevance to the park.

This case illustrates the number of administrative levels impacting on a natural territory. There is the supranational (Europe) level, the national (France – central government) level, the regional level (Burgundy), the departmental level (four departments), the inter-departmental level (Morvan park) and the communal level (133 communes) (Parra, 2010). Since 2000, another layer has been added with "pays", which stem from the medieval days and represent a legally recognized grouping of elected officials; economic, social, and cultural actors; and their associates, bringing them together to discuss development policies which should be followed by the community.

***Who are the main stakeholders?***

The main stakeholders include all those with a stake in the given territory, ranging from the communes' inhabitants to the local and regional authorities, as well as diverse interest groups. Specific bodies such as the *Conseil associatif et citoyen* or the *comité syndical* are set up with more or less decision-making power. The Morvan case reveals a multitude of private and public actors, ranging from the citizens of the communes in the park in question, through to the different levels of government, up to the European Union level.

***How is the territory framed?***

In the case of regional nature parks, communes come together to formulate a proposal for a park and submit it to the Ministry of the Environment for approval. The park boundaries generally (but not necessarily) reflect the overlap between individual communes and a common natural resource. In the case of the Parc du Morvan, it is a granite mountain situated in the heart of Burgundy which provides the core natural boundaries. However, communes that have joined the "park" are not necessarily fully within the mountain range.

***How are objectives set?***

Objectives are set through 12- to 15-year charters. The process of developing a charter is highly consultative, and is carried out through multiple meetings that bring in representatives from different interest groups.

***What policies have supported the outcomes?***

The key policy supporting the development of regional nature parks is the decree ratified in 1967 on this instrument. Additional European policies, such as the Habitats Directive (1992) have also contributed to providing an incentive to establish some Natura2000 sites within parks. Government subsidies for specific activities (for example, organic farming) may also provide incentives for the development of these activities.

***What tools are used for achieving desired objectives?***
The negotiated and participatory development of the charter is a key tool for regional nature parks. Actions then identified within the park (such as specific ecotourism or farming activities) may be supported by a series of relevant tools.

### 2.3.4. Gwaii Haanas National Park – Canada

The Gwaii Haanas National Park Reserve of Canada and Haida Heritage Site is an archipelago in Canada's Pacific coast off the Province of British Columbia. It is co-managed by the Indigenous Haida People and the Canadian government agency, Parks Canada. Gwaii Haanas, which means Islands of Beauty, covers an area of 500 000 hectares of both land and sea, in and around what was known as the Queen Charlotte Islands, which boast old-growth, coastal temperate rainforests.

In the 1970s, further to a century of industrial extraction of natural resources on the islands (notably of timber), the Haida established the Haida Gwaii Watchmen Programme and began a series of actions to draw attention to the exploitation of their natural resources.

In 1985, the Haida Nation established the Haida Heritage Site, and in 1988 the governments of Canada and British Columbia designated the Gwaii Haanas National Park. The Haida Nations continued to claim title to the islands, and while this claim was awaiting settlement, by 1993, the Gwaii Haanas Agreement was signed between the Haida Nation and the Government of British Columbia to co-manage the park (Hotte, Wyatt and Kozak, 2019). This historic agreement reflected two nations' (Canada's and the Haida Nation's) concern for and desire to conserve the natural resources of Gwaii Haanas.

In 2003, the first management plan for the terrestrial part of the park was developed. Despite this agreement, a 2005 failure by the Government of British Columbia to consult the Haida in their forestry operations led to widespread protests and blockades. The Government of British Columbia promptly resumed the land-use planning process and by 2010 a Strategic Land-Use Agreement was signed between the Council of the Haida Nation and the Province of British Columbia (Hotte, Wyatt and Kozak, 2019). It included the designation of a network of terrestrial protected areas covering 52 percent of the land area and 72 percent of coastal areas, and importantly, outlined sustainable forestry practices, including reducing the annual allowable cut and joint analyses of future timber harvests (Hotte, Wyatt and Kozak, 2019). This power-sharing agreement occurred despite continuing litigation over the tenure rights of the land (Hotte, Wyatt and Kozak, 2019).

More recently, in 2018, a joint management plan was developed (Parks Canada website). This management plan contains Haida Nation guiding principles that are respect, responsibility, interconnectedness, balance, giving and receiving, and seeking wise counsel. They are also aligned with ecosystem-based management principles that are the precautionary principle, inclusion and participation, integrated management, sustainable use, adaptive management and equitable sharing (Parks Canada, Management Plan 2018, website). The 2018 management plan for the park is co-signed by Canada's Minister of Fisheries and Oceans and the Canadian Coast Guard and the Haida Nation's Council Vice President.

A Gwaii Haanas Archipelago Management Board (AMB) was established to work closely with the Gwaii Haanas Advisory Committee during the last round of management

planning for Gwaii Haanas. It includes representatives from all three partnering organizations and is responsible for decision-making concerning the park (Neufeld, 2018). Funding for the AMB and for park activities is provided by the Canadian Ministry of the Environment (in addition to income generated from tourism), which can generate a power imbalance in the AMB. The Haida Nation has expressed concerns about pressure from the tourism sector, and the Gwaii Haanas Watchmen programme ensures that the area is treated with respect, particularly during the tourism season (Neufeld, 2018).

A 2021 Framework for Reconciliation was signed between the Haida Nation and the Government of British Columbia to "embark on negotiations that, among other things, will reconcile pre-existing Haida sovereignty with assumed Crown sovereignty and will be capable of evolving over time based on the co-existence of Crown and Haida Nation governments and the ongoing process of reconciliation" (Haida Nation, Canada and British Columbia, 2021). According to the agreement, half of all jobs, at all levels, are to be given to the Haida People (Timko and Satterfield, 2008). Training has been provided to ensure that they are able to fill these jobs.

Conservation des Forets de la Wilaya de Blida
FICHE DE PRÉSENTATION DE LA PARCELLE
DU CAROUBIER (Ceratonia siliqua)
Les Montagnes
Sanctuaires de la Biodiversité

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This case highlights a significant difference in worldviews, between the Government of Canada and the Haida Nation who uphold respect for all living things (Hotte, Wyatt and Kozak, 2019). Furthermore, the short-term capitalist view of the Canadian Government contrasts with the longer-term view, associated with respect for ancestors and nature, of the Haida Nation (Gladstone and Ruyin Yu, 2023). This case study is outstanding notably because, despite ongoing litigation, the two nations were able to collaborate effectively over management of a valuable resource. In addition, the co-management being carried out benefits from the combination of Indigenous and western knowledge, as well as devolving responsibility to those present on the ground.

***Who are the main stakeholders?***
The main stakeholders in this case have been the Governments of Canada and the province of British Columbia, more specifically the Ministry of the Environment and Parks Canada, as well as the Council of the Haida Nation. Economic interests through logging, mining, and tourism have also influenced and shaped the landscape in the Gwaii Haanas archipelago.

***How is the territory framed?***
The Haida Nation and Parks Canada designated an area in the southern archipelago as warranting protection from further exploitation. The park benefitted from a dual designation by two different governments: the 1985 designation by the Haida Nation (establishing the Haida Heritage Site) and the 1988 Government of Canada designation of the Gwaii Haanas National Park according to IUCN category II.

***How are objectives set?***
The objectives for the park were set in the 2018 management plan that was jointly negotiated and agreed by the two governments.

***What policies have supported the outcomes?***
The Government of Canada's efforts to reconcile with First Nations and to come to agreements that are acceptable to both nations (that is, Canada and First Nations) on land use has been critical to the outcome in the Gwaii Haanas park.

***What tools are used for achieving desired objectives?***
The 2018 joint management plan is a cornerstone of the lengthy negotiated process between the Government of Canada and the Haida Council. Decisions taken through the AMB are made by consensus which demonstrates the respect and full power-sharing between the two governments. Conflict resolution and negotiation have been critical in bringing the two parties together to collaborate.

### 2.3.5. The Sundarban mangroves (Bangladesh)

The Sundarbans shared by Bangladesh and India (60 percent and 40 percent, respectively) represent one of the world's largest mangrove areas (UNESCO World Heritage website).

In Bangladesh, an estimated 3.5 million people depend on this forest to harvest fish, crabs, wood and firewood (Roy, 2016). In 1996 Bangladesh designated three protected marine areas and wildlife sanctuaries (Sundarban East, South and West) as IUCN category Ib (wilderness area) for a total of 139 700 hectares and in 1997, the area was also designated a World Heritage Site (protectedplanet.net; UNESCO, n.d. *The Sundarbans*. website). A 601 700 hectare Ramsar site was designated in 1992 as the Sundarbans Reserved Forest.

Officially, the forest belongs to the government and is managed by the Bangladesh Forestry Department (Begum *et al.*, 2021). However, since 2002, with funding from USAID, the government has been experimenting with co-management of the mangrove. Although the Sundarbans protected area is listed as being under collaborative governance arrangements (protectedplanet.net), local people have to request permission from the Department of Forests to extract resources, which has led to conflicts between authorities and local communities (Roy, 2016).

The USAID-funded Nishorgo project started in 2003 and ran until 2008. It was then followed by the Integrated Protected Areas Co-Management project (2008–2013) and the Climate-Resilient Ecosystems and Livelihoods project (2013–2017), which introduced co-management of protected areas to Bangladesh. It aimed to implement co-management in five protected areas (including the Sundarbans) and to provide alternative income sources (such as handicrafts, horticulture and tree nurseries) for local communities (Begum *et al.*, 2021). Nevertheless, because of the protected nature of the Sundarbans, local people have only been allowed limited access, requiring permits and permission from the Department of Forests. Critical elements of the project were to promote community participation, inclusiveness, transparency, accountability, and poverty reduction (Rahman, 2022).

Governance is ensured through a multilayered system, with the top tier being the Ministry of the Environment, which "oversees the forest resource management activities and is responsible for planning, monitoring and implementing forest policies" (Begum *et al.*, 2021). The Bangladesh Forest Department, an agency under the Ministry, is responsible for enforcement. The next tier is made up of Co-Management Executive Committees that are set up at the forest range level (Begum *et al.*, 2021). The lowest tier is made up of the Village Conservation Forums (VCFs), each made up of 30–100 villagers (of which at least one-third have to be women). The VCF selects members to be eco-tour guides and is part of the Community Patrol Groups (Rahman, 2022). One female and one male member of the VCF are elected to be part of the Peoples' Forum (Rahman, 2022).

The system is multilayered with the possibility of escalating issues up tiers. However, at the same time, research indicated concerns over the Forest Department's ability to address issues raised by lower tiers (Begum *et al.*, 2021).

Although translated nationally, the co-management arrangements in the Sundarbans were brought in from outside (via a USAID project) initially, which has raised questions about their applicability and appropriateness in the Sundarbans context.

The process remains largely project-dependent rather than being fully institutionalized. Challenges include: unequal footing between the two co-managing entities (that is, the communities and authorities and, notably, the top-down decision-making process), limited

transparency and accountability, unequal distribution of benefits and weak organizational capacity (Begum *et al.*, 2021; Mollick *et al.*, 2022). Unequal power relations between institutions remain, with more power held by the government at district and national levels than at local levels (Begum *et al.*, 2021). Power remains centred in the government, which acts as a supervisory entity with all activities being carried out by communities, significantly weakening the cooperative nature of co-management. This "control and interference" was raised by forest communities in a survey (Begum *et al.*, 2021).

On a positive note, the programme has expanded the role of women, increased their capacity and enhanced their social networks. For example, women have been provided with the opportunity to borrow funding through savings and loan groups (Begum *et al.*, 2021)

***Who are the main stakeholders?***
The Nishorgo project was initiated by USAID (followed by other donors) to bring co-management of protected areas to Bangladesh. Through the project, a complex multitiered governance structure was developed spanning villagers and authorities at the local and national levels. Other resource partners, such as the German international agency GIZ and the European Commission, have also supported co-management in the Sundarbans. Key actors on the ground are the Department of Forests and local communities.

***How is the territory framed?***
The boundaries are those of the protected area, which comprise three wildlife reserves (that were set up in the 1990s). These three core areas (rather than one larger area) allow for a mosaic approach that intersperses protection with human activity in the areas' respective buffer zones (Chauhan and Gopal, 2014).

***How are objectives set?***
The Department of Forests is the lead agency and ultimately decides which actions need to take place in the Sundarbans. The Department oversees implementation through a co-management arrangement involving local forest authorities and local communities.

***What policies have supported the outcomes?***
Key policies include the Forest Act of 1927 and the Bangladesh Wildlife Preservation Act of 1974, as they relate to use and management of the forest and its resources.

***What tools are used for achieving desired objectives?***
A complex set of multi-layered governance bodies was set up. Training and capacity development (notably of women) has been a key tool in the Sundarbans. This training has been on monitoring, patrolling, proposal writing and leadership, among others. Training and inputs were also provided to promote alternative income-generating activities.

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# 3 Comparative analysis across case studies

## 3.1. COMMONALITIES AND DIFFERENCES

In this section, the five questions posed in Section 1 are revisited. The main governance dimensions that were highlighted in the five questions are reviewed, compared and contrasted, namely: stakeholders, framing of the boundaries, setting objectives, supportive policies and tools for achieving desired objectives.

### Stakeholders

All cases described in Chapter 2 involve multiple stakeholders. These are situated at different spatial scales, from the local (for example, farmers in the Commonland cases or in FLR in Madagascar; or the Indigenous communities in the case of Gwaii Haanas in Canada or the Xingu in Brazil) to the national (for example, different ministries, as in Japan's *Satoyama* initiatives; of the Forestry Department, as in the Sundarbans in Bangladesh) to the international (as is the case with the IMFN, REDD+ or FLR).

Different categories of stakeholders are often involved, including NGOs, IPLCs, authorities at different levels of administration and academia. International organizations may play a more or less prominent role, such as UNESCO in the case of MAB.

Each actor generally plays a different and complementary role. While local communities, farmers and private landowners might be implementing activities on the ground, NGOs often provide technical support. Their role may be more or less involved, and they may be more or less representative of the local community. For example, in the case of the Sian Ka'an Biosphere reserve, two different NGOs were involved with one being more locally rooted and the other being more driven by external interests. International organizations such as UNESCO, might provide an umbrella programme for a given initiative or champion it (for example, IUCN, WWF and FAO with FLR). Governments often provide funding and the policy framing to facilitate (or not) implementation of given approaches, such as the Japanese Government for the *Satoyama* Initiative or Australia's Landcare programme.

Groupings or associations of actors or stakeholders are often formed around a common cause as a mechanism to ensure their interests are adequately represented. This was the case for example, in Brazil's Xingu Indigenous Area where 16 Indigenous communities living in the territory re-grouped under an umbrella association (Xingu+). In Australia's Landcare, the core units, Landcare groups, can vary in size from a handful of members to over 100. Wider international networks also evolved in the case of IMFN, IPSI, Global Landcare and MAB, for example.

The role of stakeholders may vary from the more formal to the more informal. For example, a comprehensive set of organizations with relatively clear roles make up the formal national (or subnational) structure (for example, government ministries) for implementing REDD+. Traditional councils of elders, village assemblies or local Chiefs play an important role in cases such as ICCAs, CREMAs or FLR.

Equally, one could classify the role of actors as being more externally driven or internally driven. For example, co-management in the case of the Sundarbans in Bangladesh appears to have been quite strongly driven by external donors. The case of CREMAs in Ghana demonstrates another example where, although it is a nationally driven initiative, the government plays a leading role. In contrast, in the cases of the Xingu in Brazil and Gwaii Haanas in Canada, the local communities had a strong voice in the design and development of the respective initiatives. The balance between the weight of the local versus higher-level actors can often be quite skewed.

Economic actors and interests are also often involved as participants, as is the case in the French Parcs naturel régionaux model, but also often as external threats, as is the case with the forestry and mining sectors in Gwaii Haanas or the tourism sector in the Sian Ka'an Biosphere reserve.

### Framing the boundaries

In most cases, framing of the landscape was relatively dynamic, often evolving over time. Framing of the landscape can be based on biophysical characteristics, such as a watershed. More often, however, it is based on a mixture of the extent of the communities involved, combined with the boundaries of their immediate environment. For example, the territory of the Xingu Indigenous Area is framed on the one hand by the Xingu River and its basin, and on the other, by the Indigenous communities living in the area. In some cases, the definition of the boundaries was carried out in a relatively top-down fashion as is the case of the CREMAs that are selected by the Wildlife Division (based on their proximity to a protected area, among other criteria).

In practice, a biophysical feature often provides the core or the common target, as well as a more tangible boundary, onto which more fuzzy alignments of social interests adhere, thus extending the boundaries and generating both a nebulous and dynamic nature to those boundaries. In this respect, the MAB model with its three zones is a clearly defined example of many of the other cases. Model Forests and Landcare groups may be framed around an ecosystem feature (such as a watershed), an administrative unit (such as a village) or a specific issue (such as restoration). For biosphere reserves, protected areas always make up the core zone, with a transition zone representing the area where humans sustainably use natural resources. Zoning within the given space is applied not only in biosphere reserves, but also in the Commonland approach and sometimes in FLR (for example, in the Madagascar case). In some cases, an institutional factor frames the boundaries of the initiative. This is the case for REDD+, for example, which is framed by a jurisdiction.

## Setting objectives

Objectives are often a negotiated outcome representing a common goal or interest among the diverse stakeholder groups. In many cases, a visioning exercise serves to frame these objectives. This is the case for example in Model Forests and in the Commonland approach. The extent of consultations and negotiations varies from case to case. For example, in the case of *Satoyama* initiatives, community consultations are a central part of defining priorities in the landscapes. Similarly, Landcare members collaborate to reach agreed upon objectives for their landscape. Objectives may also be framed or constrained by other wider-ranging objectives. For example, FLR projects are often framed by a country's commitment to the Bonn Challenge.

In most cases, some form of document or plan is central to setting the objectives on paper. For example, in France's regional nature parks the 12- to 15-year charter is the key document framing implementation in the region and it is developed in a highly consultative manner. Many initiatives are guided by a set of principles (for example, FLR, Commonland, Gwaii Haanas and CREMAs).

A fine balance exists between objectives for the territory and forest being determined by the process itself (for example, in the case of Commonland) or being predetermined prior to an engagement process that may not be fully participatory (as in the case of some FLR initiatives or biosphere reserves). In this respect, interpretation of the notion of participation and engagement also reflects a wide-ranging scale, from full engagement to a nominal level of engagement. In some cases, the entire initiative grew out of a locally driven desire to gain legal recognition for their territory, as is the case with many ICCAs. Identifying the "centre of decision-making" is useful. In the case of the Sundarbans for example, despite a co-management process, decision-making is clearly centred in the Forest Department.

In some cases, broad objectives are predetermined by the approach itself. For example, in the case of FLR, the overarching objective is by default the restoration of functionality and improvement of human well-being in deforested or degraded landscapes. In the case of CREMAs, the primary objective is the sustainable use of natural resources. In contrast, in biosphere reserves, the objectives in the core zone are predominantly to protect natural values, while those in the transition zone are driven by sustainable development. REDD+ objectives are necessarily driven by the role of forests in climate change mitigation.

Technology, particularly satellite imagery, can be used to support objective-setting. This is the case, for example, in FLR and REDD+.

## Supportive policies and norms

Some initiatives were framed by specific policies, as is the case with Landcare in Australia, but many were not. In some cases, they were aligned with the main forest and land-use strategies or policies. For example, the Brazilian Forest Code which requires restoration where a minimal forest cover is not attained, provided the framework for the Xingu Seed Network, which is a major source of income for the Xingu.

Relevant policies may be sector-based, for example on forests or on wildlife. But they may also be issues-based, as is the case with the growing recognition of the rights on Indigenous Peoples providing a basis for the formal recognition of many ICCAs.

International and national policies may contribute to framing an approach. For example, REDD+ objectives are generally set within a National REDD+ Strategy or a country's nationally determined contributions to the UNFCCC. Conversely, objectives set under an initiative could be integrated into other plans, such as the local development plans in Madagascar.

Policies from other sectors often have a dominant impact on forests. These may be positive, but are often negative, as is the case with policies and subsidies to expand agriculture or mining into forested areas (such as the examples from Brazil or Canada).

International commitments and the international forest regime also influence the way in which governments implement their own forest and related policies. This is clearly the case with REDD+, but to a certain extent this is also the case with FLR. Other associated initiatives such as biosphere reserves or Model Forests also provide an international context for national implementation.

Local by-laws may pre-exist or be designed specifically to support implementation. This was the case for example with CREMAs in Ghana. Traditional norms can be a very strong supportive mechanism for success. For example, the strong local institutions in Xingu have ensured reduced forest loss over the years within the PIX as compared to its surroundings.

## Tools for achieving desired outcomes

In practice, a plethora of tools can be used to implement the different approaches described in this report. This reflects the context-specific nature of many approaches. For example, the *Satoyama* Initiative, French regional nature parks and the FLR project in Madagascar, address agriculture diversification and improvements, local alternative income generation, as well as improving forest cover.

Some of the overarching categories of tools include: mapping and other GIS-based tools; participatory tools; partnerships; monitoring tools; capacity development; alternative income-generating activities; microfinance; improved agricultural techniques; and conflict resolution and negotiation tools (see Table 1).

TABLE 1
**Examples of tools**

| Category | Examples |
|---|---|
| Mapping and other GIS-based tools | FLR in Brazil: IIS tool WePlan<br>Commonland<br>REDD+ |
| Participatory tools for engagement | Commonland: Vision-setting participatory exercises<br>CREMAs: jointly developed constitution<br>Landcare: visioning exercises |
| Partnerships | Model forests<br>Xingu+<br>Landcare |
| Roadmaps | Charter for the *Parc naturel régionaux* in France<br>Landcare<br>CREMA constitution |
| Monitoring tools | REDD+: GIS mapping<br>Xingu: 10 monitoring posts set up by communities<br>Bangladesh: Community Patrol Groups<br>MAB |
| Capacity development | FLR in Madagascar<br>IMFN<br>Satoyama |
| Alternative income-generating activities | Commonland in South Africa: production of essential oils<br>MAB Sian Ka'an: setting up ecotourism businesses<br>Brazil: Xingu Seed Network<br>FLR in Madagascar: fish farming<br>CREMAs: shea butter production<br>Bangladesh: horticulture |
| Microfinance | Commonland in South Africa<br>Bangladesh: savings and loans schemes |
| Improved agricultural techniques | Landcare in the Philippines: establishing narrow contour strips of vegetation<br>FLR Madagascar: improved rice cultivation |
| Conflict resolution and negotiation tools | Gwaii Haanas<br>France Regional Nature Parks |

*Note:* Global Information System (GIS)/ Forest Landscape Restoration (FLR) / Reducing Emissions from Deforestation and Forest Degradation (REDD+)/International Institute for Sustainability (IIS)/Community Resource Management Area (CREMA)/ Man and Biosphere Programme (MAB)/ International Model Forest Network (IMFN)

*Source:* Authors' own elaboration.

In some cases, specific guidelines and guidance were developed, for example by UNESCO on MABs, or by UNEP and UNDP on ICCAs.

In most cases, some sort of management plan (or contract or charter) was developed to serve as a formalization of the agreements among stakeholders. This written tool serves to frame the shared priorities (or vision) for the landscape and the management actions to implement. Thus, it provides a mechanism to ensure that all stakeholders endorse a common roadmap.

Alternative income-generating activities (often associated with some form of microfinance scheme) are important, particularly as often the territories in question are rural and already suffering from unemployment or other socioeconomic difficulties. Thus, economic dimensions are important and income-generating activities are often central to ensuring that both the social and the ecological dimensions of forest management can be achieved. These can be found for example, in the FLR initiative in Madagascar, the Xingu Indigenous Area in Brazil and the IMFN.

## 3.2. SUCCESS FACTORS

A number of factors that lead to success have emerged from this review.

**Partnerships** – Partnerships, networks, coalitions and other forms of collaboration appear central to the governance of forested landscapes. The importance of partnerships across different stakeholder groups is highlighted, for example in the IMFN and in the French regional nature parks examples. The Landcare programme in Australia was viewed as a critical partnership between governments, communities and businesses. These cases emphasize both the importance of engaging different partners and offering a mechanism for effective discussion and meaningful participation (HLPE, 2018). In this respect these models emphasize the true *partnership* nature of their approach.

**Inclusivity** – All cases demonstrated the importance of including diverse stakeholders with a vested interest in the landscape and forest. An inclusive multistakeholder process provides a voice for vulnerable and marginalized community groups (von Essen and Lambin, 2021), such as youth, elders, women, poorer households, and other minority groups. It ensures that women and men, are equally represented in decision-making at all levels.

**Locally grounded** – Most of the cases reviewed have strong local roots. For example, the Commonland approach starts with the development of a long-term vision for the landscape that is elaborated together with landscape stakeholders.

**International launchpad** – Several initiatives have benefitted from the international visibility generated by a major launchpad. For example, the *Satoyama* Initiative was launched at the 10th Conference of the Parties while the IMFN was launched at the Rio Earth Summit. Similarly, FLR has benefitted from the Bonn Challenge. These "launchpads" generate momentum, funding and interest in the initiative, as well as an (implicit) commitment by its instigator to report back and ensure its success.

**Business ventures** – Ensuring the development of a viable and sustainable business proposition (as is the case with Commonland) is a way of engaging local stakeholders and securing their long-term benefits from the landscape, while ensuring the impact

on the environment is minimized. In the Xingu Indigenous Area in Brazil, the sale of certified honey from the park provided Indigenous communities with significant income without engaging in the same destruction of their forests as surrounding communities.

**Knowledge and learning** – Various examples refer to the importance of knowledge and learning. In particular, there is reference to the importance of co-construction of the knowledge base, evidence-based management, and the integration of western and Indigenous knowledge, as is the case for example, with *Satoyama* initiatives. Building cross-sector knowledge and enabling spaces to learn through sharing was also important, as in the IMFN process.

**Top-down and bottom-up** – Combining top-down approaches (for example, in the UNESCO-led Man and Biosphere Programme) with bottom-up approaches (such as traditional land management practices) provide for richer and more comprehensive mechanisms to govern the landscape. For example, the IMFN was a top-down process initiated by the government of Canada. Nevertheless, a cornerstone of Model Forests is participation and collaboration among local stakeholders to define priorities for their specific Model Forest. Balancing decision-making from the top with the local level was also identified as an issue in the Australian Landcare programme.

**A shared problem** – Recognition of a shared problem may help to generate the momentum necessary for collaborative governance approaches. The Landcare programme in Australia for example, is centred on collaboration around the common problem of land degradation. Working from the recognition of this common problem helps to build collaboration, to discuss and negotiate possible solutions and implement the selected solution(s).

**Continuous learning** – One thing that is apparent is that success stories in forest governance do not appear overnight. Instead, good cases often build on previous experiences, institutions, projects or models. The case of REDD+ in Acre demonstrates this gradual evolution, building on existing institutions. Similarly, the case of Commonland in South Africa evolved – notably in size and in framing – over the years. Also, the case study on FLR in Madagascar was built over four successive phases, funded by different donors with slightly different foci.

**Integrating forests with agriculture and other land uses** – Critical to many of the approaches explored here (for example, Commonland, *Satoyama* and FLR) is the importance of integrating forests with other land uses, and in particular food production. The larger scale provides the opportunity to develop different land uses and to balance out the different functions that forests can provide in the landscape.

## 3.3. CHALLENGES

Some key challenges emerged from the case study review.

**Spatial framing of governance** – The issue of spatial scale raises multiple challenges. Larger spatial scales bring more options for trade-offs, more stakeholders and therefore, more interests, result in greater complexity. At the same time, smaller scales provide for greater facility to manage the forest, but also less resilience and potentially higher risks. Spatial framing also refers to the multiple layers of governance. While the framing of the

territory under management is one element, the influence of other layers of governance can have serious implications on that territory. The example from Brazil illustrates well the complexity of multiscale governance: while the PIX developed its own governance model that worked well for several years within the confines of its boundaries, increasing pressure from outside has taken its toll.

**Elite capture** – At times, the engagement of local communities may be flawed with elites capturing the benefits or being the only ones represented within governance bodies. For example, Baruah (2017) notes "that in CREMAs the authorities who are chosen to manage "community-based forestry" initiatives do not necessarily represent local interests and needs." Von Essen and Lambin (2021) note that jurisdictional approaches are more prone to elite capture as the diversity of stakeholder views may not be fully represented and the challenges of advancing on progress may override more lengthy negotiation.

**Silos** – A horizontal challenge of large-scale forest initiatives is the lack of integration across sectors. In the IMFN case, in Canada, the housing of what was essentially a social forestry process in the forestry division was deemed inappropriate in a review carried out in 2011. This exemplified the siloed approach taken (Bullock, Jastremski and Reed, 2017). Contradictory policies in different ministries may also prove challenging at the local level. For example, in the French regional nature parks, agriculture policies may clash with environmental ones.

**Political change** – Over the lifetime of many of the initiatives reviewed, political changes have occurred which may have important impacts on these initiatives. Thus, a champion of a particular initiative may carry significant weight in its development and implementation. When this champion loses their seat of power, the initiative may lose some of its visibility and importance. In Madagascar for example, the local mayor was an important champion and partner in developing the FLR project. When he lost his position, it became more difficult to implement the project. At a much higher level, the withdrawal of the United States and the United Kingdom from UNESCO in the 1980s–1990s led to severe funding cuts to the MAB programme, thus affecting its implementation (UNESCO, 2006).

**Scale mismatches** – At the core of territorial approaches to forest governance, lies the issue of scale. Yet, scale mismatches are the norm rather than the exception. Scale mismatches occur between the objectives set for the ecological system and those set for the social system. They also occur within the social system (for example, the farmers in the Landcare programme needing to manage their own estates for sustainability, but depending also on their neighbours for the watershed services provided). And finally, they occur between administrative processes (such as with local authorities often being required to carry out work when funding is blocked at a higher administrative level).

**Rhetoric versus practice** – Where initiatives have been externally driven, the difference between rhetoric and practice can lead to poor implementation (or abandonment of initiatives as soon as the external actors leave). An example of this is co-management arrangements whereby natural resources (such as forests) are managed in a collaborative fashion between resource users and government but in practice the government retains most of the power. This was the case for example in the Sundarbans. Co-management

arrangements more generally have been criticized for not providing equal voices to both parties (managers) (Castro and Nielsen, 2001).

**Tenure rights** – In many cases, the lack of security of tenure rights is a critical, or at least a compounding, factor to poor forest governance and the ensuing mismanagement, degradation or loss of forest resources. The Gwaii Haanas case demonstrates the complexity of tenure rights. In this case, although the governments of Canada and of the Haida Nation have not yet agreed on legal ownership, they were able to agree to (urgently) collaborate to protect the rich natural heritage of Gwaii Haanas.

**Lack of local grounding and power imbalances** – In many cases, imposing external agendas leads to poor integration of local priorities and power imbalances. This is something that biosphere reserves have suffered from. For example, the Sian Ka'an community felt that "the project was designed by trying to meet the interests of the funder rather than from an actual need in or relevance to the community. If ENGOs thought of the Maya as collaborators rather than recipients, they would be much more successful" (Martínez-Reyes, 2021). This has also happened in some cases with FLR, where objectives set for FLR may reflect the priorities of external actors but not necessarily those of IPLCs.

**Long-term nature** – In all cases, the complexity of social-ecological systems signify that multiple phases are necessary to go from decision-making to implementation. For example, the Fandriana-Marolambo FLR case in Madagascar was implemented over four successive phases and 13 years. The MAB evolved progressively, with new dimensions being added at ten-year intervals (associated with its global conferences).

**Commodification of nature and forests** – Many of the approaches refer to forest "assets" and "capital". This commodification of nature and forests results from a neoliberal approach to forest governance and management. Yet this differs substantially from the approach taken by many IPLCs, most notably in the cases of Xingu, Gwaii Haanas and many (if not all) ICCAs. In these cases, worldviews are significantly different and rest in a much stronger interconnection between nature and people, far from commodifying nature. This clash of worldviews can be an obstacle to collaboration.

## 3.4. EMERGING LESSONS

In this section, major lessons emerging from this review are identified. They build on the challenges and success factors identified previously.

**Lesson 1** – Larger spatial scales provide an opportunity for more actors to voice their ***interests***. Territorial approaches and landscapes are framed around the notion that they offer an arena for more actors to come together and negotiate acceptable outcomes for conservation, use, management and governance of a territory. *Satoyama* landscapes, Landcare, IMFN, Commonland and FLR all reflect the ambition to plan at a larger scale and to reconcile diverse interests.

**Lesson 2** – The ***boundaries*** of a landscape are not set in stone. Territories are dynamic and in constant flux and so are their boundaries. In many of the cases reviewed, landscapes have evolved over time, reflecting the dynamic nature of social-ecological systems. That may create some complexity but it is also reflective of reality. While planning requires

some idea of the boundaries of a territory, in practice some flexibility is necessary as opportunities arise and new stakeholders engage with the landscape. Rigid and linear approaches to governance in forested territories are unlikely to function.

**Lesson 3** – Many and diverse stakeholders play a ***part*** in the governance of forested landscapes. Often, they may be found at different spatial scales, reflecting the multiscale nature of forest governance, and their roles in shaping the landscape may be different. This diversity should be reflected in the engagement strategy and in the implementation plan. For example, the role of UNESCO at the international level in designing and steering the Man and Biosphere Programme can be contrasted with the role of local NGOs and IPLCs in implementation at the level of biosphere reserves.

**Lesson 4** – It is possible to follow different ***pathways*** in seeking to achieve forest governance in larger spatial scales. There is no single approach and pathways reflect the diversity of social-ecological systems. For example, one criterion for CREMAs in Ghana is that there already exists some form of community organization. In other cases, new bodies may be established. For example, in the case of Bangladesh a whole new set of governance bodies was established. Entry points can also differ. Sometimes an approach is just about ***facilitating*** and ***organizing*** what is there in a targeted fashion. For example, the IMFN acknowledges that its approach is not new, but it is more the ways in which it organizes elements and helps to structure an approach to forests and landscapes that is innovative.

**Lesson 5** – A ***phased*** approach provides sufficient flexibility to adapt to evolving social and ecological systems. Such an approach helps to gradually build from previous phases. It also allows for the time necessary to achieve real change. From the cases reviewed, phases typically reflect in some form: consensus around a common problem, visioning, partnerships, research, monitoring, upscaling and dissemination.

**Lesson 6** – Rallying around a shared problem helps to establish common foundations for advancing forest governance. ***Vision***-setting is important at the local level. Most of the cases reviewed had some form of visioning exercise to align stakeholders' interests. Developing a collaborative and participatory long-term vision through mapping, discussions, negotiations and other appropriate approaches provides a long-term roadmap for actions and interventions, as well as a common starting point to rally different groups in a landscape. Visions are usually general but serve to frame more detailed negotiations and to find common ground for a Socio-Ecological Territorial Agreement (FAO, 2016).

**Lesson 7** – It is fundamental to learn from ***locally rooted*** initiatives and to build from those. Territories are primarily locally rooted. For example, the *Satoyama* Initiative is rooted in Japanese rural cultural practices, the Gwaii Haanas protected area is rooted in the Haida People's connection with their environment. These local roots ground an initiative in the local reality, rather than being imposed from outside. In contrast, an international dimension, connecting different landscapes, learning from a network and giving visibility to initiatives may prove valuable. When an international dimension is promoted however, it should add value and not just represent an added layer of complexity.

**Lesson 8** – The concept of local ***custodianship*** is essential to the effective governance of forested landscapes. Those living in the forested landscape and who are dependent

on it are those most suited to be custodians of the landscape. Rights holders need to be recognized and empowered to be effective custodians of their land and forests. The Gwaii Haanas and Xingu cases illustrate the importance of recognizing local custodianship.

**Lesson 9** – it is challenging to find the right ***balance*** between objectives set for the ecological system and those set for the social system. Trade-offs are inevitable and need to be identified, addressed and managed. Some of the cases have illustrated a skewed set of priorities. For example, Landcare was criticized for focusing more on development than environmental conservation, while in contrast the community in the Sian Ka'an biosphere reserve felt that environmental conservation was prioritized over the community's development needs. Stakeholders will have different objectives and reconciling these is a central pillar of territorial approaches.

**Lesson 10** – Securing tenure recognizes legitimate rights and provides assurances that benefits will accrue to the rightful custodians of the territory or forest. ***Tenure rights*** determine who has access to what and when and for how long. This is a fundamental dimension of forest governance in landscapes. Overlapping or conflicting tenure rights or systems are common, and customary tenure systems are often not legally recognized by modern governments.

**Lesson 11** – Formal and informal ***institutions***, existing or new, need to be strengthened for effective forest governance. Institutions situated at different scales are important and relevant; they may be formal or informal. There are few cases where all institutions of relevance to a forested landscape were strong enough to be effective in a complex socio-political and economic environment. Strengthening these institutions is paramount to effective forest governance. Furthermore, to be fully integrated in a given context, it is necessary to embed governance approaches in existing institutions.

**Lesson 12** – ***Alternative income-generating activities*** are critical to marry ecological and social outcomes. Most of the cases reviewed applied such activities. They reflect the mounting economic pressures that forests face in a globalized world. Activities that value standing forests are particularly important.

**Lesson 13** – A careful analysis of actors and power relations reveals where the ***centres of power*** are situated. While it is essential to collaborate with actors in those centres of power, they may not always be the legitimate rights holders. Mechanisms may need to be put in place to give legitimate rights holders a more powerful voice. Elite capture has been an issue in many cases, for example, in the CREMAs in Ghana.

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# 4 Guiding principles and recommendations

Seven high-level guiding principles have emerged from the elements identified in the previous subsections. They provide direction when engaging in territorial approaches to forest governance. These guiding principles build on success factors identified in the case studies, as well as seeking to overcome the challenges raised. The lessons that have been presented in the previous section also result from an analysis of challenges and success factors and contribute to informing the proposed guiding principles.

The guiding principles described here focus on strengthening institutions to better tackle the multiple scales of governance inherent to territorial approaches. They are based on the conceptual elements presented in Section 1 and on the evidence emerging from the cases presented in Section 2. Recommendations below each guiding principle are practical and targeted at national and local policymakers as well as other practitioners.

### GUIDING PRINCIPLE 1: DYNAMIC

***Institutions need to respond to the dynamic nature of territories***

Territories are characterized by flux. This flux exists over space and time. Landscape boundaries evolve with the inclusion of new stakeholders (communities, but also for example, private corporations with an interest in the landscape). Over time, this evolution may steer initiatives in unexpected directions. For example, Landcare, *Satoyama* and Model Forests each evolved from one country (Australia, Japan and Canada, respectively) to become international networks of initiatives spanning the globe. Similarly, forest landscape restoration began as an idea launched by two conservation organizations (WWF and IUCN) in 2000 with an emphasis on restoring biodiversity and improving well-being. It has become a global phenomenon with governments embracing the approach, notably as a way to reduce their carbon footprint. At the same time, ecological conditions also evolve over time, partly as a result of actions carried out under territorial approaches to forest governance, but also at times in unexpected ways, such as pest outbreaks, which may significantly alter the natural landscape. In response, institutions need to be flexible and adaptable to these changing conditions.

**Recommendations**

- Recognize that landscape or territorial boundaries might evolve with time and that institutions may need to adapt in response.
- Implement clear monitoring mechanisms to track changes in the social-ecological system and respond and adapt to these changes.

- Consider mechanisms to promote top-down and bottom-up linkages (for example, through multistakeholder platforms) associated with the forested landscape, as these can improve overall governance.
- Record jointly negotiated scenarios in a document such as a charter, vision statement or management plan. Such a document can help to frame the geographical scope of institutions and provide direction and a common understanding of the desired outcomes in the forested territory, providing some stability amid dynamic conditions.

## GUIDING PRINCIPLE 2. POLYCENTRIC

### *Governance arrangements should be designed to connect multiple scales, reflecting the multilayered nature of complex social-ecological systems*

Polycentric governance reflects multiple decision-making centres that are characteristic of territorial approaches and social-ecological systems. In a polycentric system, changes in one part of the system have repercussions on other parts. For example, in the Xingu Indigenous Area, land use changes carried out around the reserve had impacts on the reserve itself, and national level policies encouraging agricultural expansion also impacted on the reserve and its people. The linkages between the different centres of power are important. Networks (such as the MAB) can contribute to facilitating exchanges across different centres of power.

**Recommendations**

- Identify who takes which decisions with respect to the forest and landscape. This helps to shape relevant policies, programmes and strategies.
- Take the time to fully understand the actors and associated formal and informal institutions within a forested landscape to ensure better engagement across these different groups.
- Recognize the added value of different actors and associated institutions situated at different administrative scales, and how they relate to the forested landscape, to provide strong foundations for effective governance.
- Recognize that external agencies can play a role in bringing together different actors (acting as an umbrella) to formalize governance arrangements.
- Use inter-disciplinary teams to support collaboration across sectors and improve mutual understanding around governance priorities.
- Analyse and understand how power is divided among stakeholders that operate in the landscape, which is critical to designing equitable policies for territorial governance.
- Prioritize strengthening the capacity of local communities and their institutions so that their voices can be heard, and they can be represented effectively in governance arrangements at higher administrative scales.
- Foster the use of partnerships (such as alliances and networks) across different stakeholder groups (for example, communities and NGOs) to strengthen the voices of less powerful stakeholders in governance mechanisms at different spatial scales.
- Discuss with key stakeholders (national and local) which pathways (for example, sectoral policies or changes to tenure and property rights) might have the largest impact on governance of the forest and landscape.

## GUIDING PRINCIPLE 3: LOCALLY ROOTED

### *Ensure that priority is given to governance at the grassroots level to achieve common objectives*

Building on what is there, rather than designing new models, is generally preferable. In all countries, there are a wealth of locally grounded approaches to land and forest management and governance, resulting from centuries of intimate local knowledge of the landscape. This is the fundamental starting point for ICCAs, for example. Approaches brought in from outside are unlikely to succeed if they do not include some local roots that characterize social-economic systems. The examples in Sian Xa'an and Bangladesh in Section 2 reflect this challenge. Local-level communities are key actors in governance but to effectively engage them requires an understanding of their own grassroots institutions. Integrating these institutions in broader governance arrangements strengthens their value and acceptability.

**Recommendations**

- Build on traditional practices associated with the custodianship of forests and ground interventions in the local context.
- Understand local (informal) norms and institutions, governance bodies and mechanisms to identify useful intervention points to improve governance of the forest and landscape.
- Recognize and promote local (customary and traditional) governance arrangements, practices and tools to contribute to improving the overall governance of a forested landscape.
- Strengthen local institutions that are critical to the forested territory.
- Work with local partners (for example, NGOs or farmers' associations) to establish or formalize (if necessary) legitimate representative institutions that can play a central role in the governance of the landscape.
- Implement culturally sensitive approaches to ensure that institutions governing a forested landscape are locally grounded.
- Assess and incorporate relevant local knowledge in grounding institutions in the communities situated within the landscape.
- Integrate local customs and cultures in governance processes to strengthen and enrich them.

## GUIDING PRINCIPLE 4: EMPOWERING

### *Ensure grassroots management entities are empowered, notably through secure forest tenure*

Rights holders in rural or forested landscapes may not always have the power to have their rights enforced. There is a need to reverse the situation and ensure that legitimate rights holders can be active and informed participants in shaping their landscape. Empowering rights holders gives them the possibility to engage as equal partners in decisions that affect them directly. When considering forests and landscapes, basic rights relate to tenure and property rights.

**Recommendations**

- Establish mechanisms that recognize and secure tenure and property rights, to contribute to equity, legitimacy and sustainability within the landscape.
- Build the capacity of local communities to enhance their decision-making power.
- Build the capacity of, and provide support to, local and devolved authorities to ensure that they can be active participants in local governance institutions.
- Map power relationships among different communities and other landscape actors (for example, private sector interests) to contribute to designing appropriate institutions for the landscape and its forests.
- Provide platforms for open and equitable negotiations to strengthen representation in decision-making bodies.
- Ensure locally appropriate and culturally sensitive engagement practices to provide all participants with an equal voice.
- Facilitate negotiations among different stakeholder groups in the landscape (for example, communities, corporations and Indigenous Peoples) for effective governance.
- Find leverage points that can influence governance (such as traditional authorities or formalizing customary tenure) to secure benefits for rights holders in the landscape.

## GUIDING PRINCIPLE 5: FINANCIALLY VIABLE

### *Integrate financial and business considerations to secure sustainability*

Forest conservation often competes with short-term, high-reward activities that exploit natural resources. Beneficiaries are usually located far from the landscape. At the other end of the spectrum, conservation activities may also lead to local exclusions and minimize options for securing local livelihoods. Interventions in a landscape that aim to improve forest governance have to consider these costs and benefits and ensure that they are financially viable for local communities, particularly the most vulnerable.

**Recommendations**

- Acknowledge and address the opportunity costs brought by changes in forest management and governance.
- Consider the diverse components of the well-being of local communities, including food security, healthcare and jobs, among others to understand the costs and benefits of interventions in a landscape.
- Assess local livelihoods to define viable business propositions that are compatible with the sustainability and resilience of the forested landscape.
- Carry out a cost-benefit analysis for forest management interventions from the viewpoint of key local communities to provide critical information to shape incentives, compensation and other economic policies.
- Identify potential conflicting uses of forests to determine where incentives should be prioritized.
- When designing forest interventions, minimize losses for local communities by prioritizing and providing compensation, if necessary.
- Long-term and innovative funding mechanisms (such as PES schemes) can contribute to securing sustainability.

## GUIDING PRINCIPLE 6: COLLABORATIVE

### *Promote collaborative approaches that bring different expertise, knowledge, strengths and roles together around a common problem*

By definition, larger spatial scales bring in multiple stakeholders and interests. Collaboration is essential to begin to align different interests and work toward a common objective. Coalitions of partners that are representative are more successful. Collaboration can be across scales through diverse networks (for example, MAB and IMFN) or it can be within a landscape across different stakeholders (for example, the French regional nature parks or Landcare).

**Recommendations**

- Identify a common problem or trigger to foster collaborative approaches to forest governance. A common problem is an effective mechanism to engage different governance actors.
- Build trust among disparate groups (such as communities, NGOs, local authorities and extension officers) situated at different levels of governance through professionally facilitated negotiations toward a common vision for the forest and landscape. A common long-term vision for the territory provides a basis for associated governance and management interventions.
- Use visualizing tools, such as GIS and 3-D models, among others, to support the development of a common vision for the forested landscape.

## GUIDING PRINCIPLE 7: INCLUSIVE

### *Foster inclusion, particularly of the more vulnerable and marginalized communities in the landscape*

A balance needs to be struck between objectives set for the social system and those for the ecological system. In this respect, inclusivity refers to the entire social-ecological system. Inclusive approaches also reflect cross-sectoral integration. To avoid siloed approaches to policymaking, intersectoral government bodies can improve alignment across sectors and provide more inclusive policies. Importantly, inclusivity signifies that governance institutions should be developed and implemented together with key stakeholder groups, and in particular local communities and rights holders (such as in the Gwaii Haanas case).

**Recommendations**

- Set objectives for desired changes in both the social and ecological systems through multidisciplinary teams that are informed by local knowledge.
- Integrate sectors through the creation of national and local-level cross-sectoral decision-making bodies.
- Strengthen the legitimacy of governance bodies by integrating rights holders.
- Design actions that can promote win-win solutions between communities and rights holders, or else consider fair compensation mechanisms.
- Identify levers of change (for example, those related to policies, markets or social aspects) to provide a useful starting point for effecting changes in governance.

FIGURE 2
**Overview of guiding principles**

*Source:* Design adapted from https://www.presentations2go.eu

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*For more information, please contact:*

Forestry Division – Natural Resources and Sustainable Production
NFO-Publications@fao.org
www.fao.org/forestry/en

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